

**School Health Education and Issues of Going to Scale:
with special reference to the Child-to-Child Approach in Zambia**

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Abstract

The aim of my research is to study how school health education programmes 'go to scale'. This is explained through an examination of the Child-to-Child approach. Child-to-Child is an approach to health education, regarding children as partners in health promotion. Although the approach has been used in more than 70 countries, most of projects using the approach have been in small scale. There is a need to examine how to scale up educational change systematically. The working definition of 'Going to scale' or 'scaling up' in this thesis includes three different dimensions; system change, quantitative change and qualitative change.

The main research question of this thesis is;

How educational change using the Child-to-Child approach go to scale?

The subsidiary questions are;

- (a) How has the Child-to-Child programme using the Child-to-Child approach in Zambia gone to scale?
- (b) What are the constraints and enabling factors of going to scale?
- (c) What are potential relevant models of going to scale?

Since 1986, the Ministry of Education in Zambia has implemented the Child-to-Child programme using the Child-to-Child approach. This research uses 3 case studies in 3 provinces in Zambia. The Child-to-Child programme has scaled up in terms of all the three dimensions of change; system, quantity and quality. However, qualitative change was not yet satisfactory.

Some of the identified enabling factors are: the central government' approval; appointment of the Child-to-Child co-ordinators; donors' support; critical masses of enthusiastic teachers; and training workshops. Some of the constraints include lack of financial resources, ineffective one-off out-of-school workshops, personal jealousies and conflicts among educational officers and teachers, lack of ownership and lack of system support. Three potential relevant models are proposed for going to scale.

Innovative teachers' commitments and enthusiasm are significant in educational change. It is, therefore, important to identify and utilise innovative teachers as resource people to influence their colleagues.

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Abbreviations

AIEMS	Action for Improving English, Mathematics and Science
BESSIP	Basic Education Subsector Sector Investment Programme
CAFOD	Catholic Fund for Overseas Development
CDC	Curriculum Development Centre
CHEP	Copperbelt Health Education Project
CIDA	Canadian International Development Agency
CtC	Child-to-Child
DEO	District Education Office
DFID	Department for International Development
DLTTC	David Livingstone Teacher Training College
GRZ	Government of the Republic of Zambia
EFA	Education for All
ESIP	Education Sector Investment Programme
HFA	Health for All
ICL	Institute of Christian Leadership
INSET	In-service training
MOE	Ministry of Education
MOH	Ministry of Health
PAGE	Programme for the Advancement of Girls' Education
PEO	Provincial Education Office
SIDA	Swedish International Development Agency
SHAPE	Self Help Action Plan for Primary Education
SHG	Spearheading group
SPARK	Skills, Participation, Access, Relevant Knowledge
TESSIP	Technical Education Subsector Investment Programme
TTC	Teacher Training College
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
WASHE	Water and Sanitation Health Education
ZCSS	Zambia Community Schools Secretariat
ZOCS	Zambia Open Community Schools

Terms used in this thesis

Educational change (Chapter 3): It includes both educational innovations and reforms.

Going to scale/ scaling up (Chapter 3): A working definition of ‘Going to scale’ or ‘scaling up’ in this thesis includes three different dimensions; quantitative change, system change and quantitative change.

The Child-to-Child Approach (Chapter 4): It is an approach to health education, based on the assumption that children can be effective health promoters not only to their siblings and younger children but also to their families and the community. Also the CtC approach became recognised as ‘another path to learning’ (Hawes 1988) which is not only confined to health education but also enhancing quality education (Tay 1989).

‘Compounds’ in Zambia (Chapter 6-): ‘Compounds’ in Zambia are shanty impoverished slum areas.

‘Community schools’ in Zambia (Chapter 6-): Community schools are non-formal schools, which provide basic education for four years mainly in ‘compounds’. They are recognised by the Ministry of Education.

Boma (Chapter 7) district administrative centre



Chapter 1 Introduction

1.1 Introduction

“ Going to Scale:

The 1980s demonstrated that many programmes related to the human goals for the 1990s lend themselves to mass application at national levels. ... The Challenge of the 1990s is to disseminate what has already been learned from pilot projects in earlier decades to a scale that can lead to universal coverage of most of the basic services for human development” (UNICEF 1989, p.34).

This chapter presents problem identification, research questions and aims of the study. It also presents the structure of the thesis. My interest in health education is also explained.

1.2 Problem identification

1.2.1 Personal background

I became interested in health education through my work experiences especially in Kenya and Pakistan. While I worked for two years at a ‘harambee school’, a community funded secondary school, I learnt of the hardship of life within a rural village in Kenya. Living without fresh running water or electricity, I contracted Malaria three times and attended several funerals of young people, including babies. One of my students passed away as a result of AIDS.

Subsequently in Pakistan, I carried out research on basic education and donors’ input as an educational consultant in 1994. I found out that more than 70% of the whole population is suffering or at risk of Iodine Deficiency Disorders (IDD). People with IDD on average lose 10 to 15 points of intelligence quotient (IQ). If the average intellect is 100 points of IQ, this means they would lose 10 to 15% of their normal intellectual ability. Prevention of IDD is relatively simple, as it only requires introducing iodised salt into the daily diet. However, because of the lack of information on the relation between IDD, iodised salt and loss of intellectual ability, these people cannot make an informed choice, even when iodised salt is available.

Gradually I became convinced that for children in developing countries, learning how to protect the health of themselves, their family and community members is more critical

than learning academic subjects that may be irrelevant to their lives. Thus I became interested in health education in schools.

1.2.2 School health education

School based health education has become recognised as a key to achievement from both global initiatives of Health for All and Education for All perspectives. It can reach 71% of children in the developing world, who are now completing at least 4 years of primary schooling (UNICEF 1995). Also the school health programmes are one of the most cost-effective methods of public health intervention (World Bank 1993).

Despite international efforts to promote school health education, it is not often given priority in many countries. Also, many existing interventions have been successful on the small scale but have never progressed beyond the pilot stage.

Hubley (1996) identified “many exciting interventions which have been successful on the small scale but have never progressed beyond the pilot stage. The problem with these pilot projects has been that success is often due to the enthusiasm and commitment of the researchers and teachers and the support and supervision provided by the project teams. This is difficult to replicate on a larger scale” (p.72).

If only a limited number of schools benefit from health education because of some enthusiastic teachers or local NGOs, even though it may be sustainable, these become prestigious schools. However, this leaves behind the other schools and other children who are in need of health knowledge and skills and their needs should also be addressed.

As recognition of the importance of school health education has increased, some innovative concepts in relation to school health programmes have been evolved. One of them is the Child-to-Child approach, which will be discussed in the following section.

1.2.3 The Child-to-Child approach

Child-to-Child (CtC) is an approach to health education. It focuses on the role of children as partners in health promotion. It is based on the assumption that when children learn to take decisions about health in school it helps them lead healthier lives and spread health to others in their families (Hawes 1997). It is aimed at improving health status of children and their community members. Since its inception in 1978, a variety of projects have applied its ideas in more than 70 countries.

UNICEF acknowledged its achievement by presenting the 1991 Maurice Pate Award to the CtC Trust based in London. James Grant, the former UNICEF's Executive Director referred to its achievement as "extraordinary and exemplary leadership in and contribution to the advancement of the survival, protection and development of children".

Although CtC started as an approach to health education, it is also recognised as a means of improving the quality of education in general (Hawes 1988; Tay 1989, p.143). There are a wide range of interpretation of CtC in the field and this width and flexibility creates ownership of users.

"There is no doubt that the Child-to-Child programme has led to many exciting and innovative activities in the field of school health education. From the various accounts of Child-to-Child activities, the main question appears to be that the feasibility of scaling up and replicating these activities within formal education systems" (Hubley 1996, p.20)

I will not therefore try to examine validity of CtC in this study, but will analyse how educational change using the CtC approach can go to scale. I will also identify some enabling factors and constraints for scaling up such educational change.

1.2.4 Educational change and Issues of going to scale

"Common knowledge holds that it is not an easy task to go to scale; that the duplication, replication, generalisation, and massification of promising innovations and pilot projects are processes fraught with obstacles" (Shaeffer 1994, p. S-1)

Recent literature has discussed issues of going to scale in relation to participatory rural appraisal (PRA) (Chambers 1995; Blackburn with Holland 1998) and in relation to the developmental impact of NGOs (Edwards & Hulme 1992; Uvin 1995). However, research on educational change in general has mainly focused on barriers and obstacles and little has been done on the processes, which ensure the sustainability and replicability (Little 1994, p.11). A limited number of studies on issues of going to scale in relation to educational change have been identified (Kemmerer 1990, Shaeffer 1994; Elmore 1996, Ordonez and Montana 1998). Thus there is a need to study a mechanism of scaling up educational change.

Some of the issues concerning educational change and its 'going to scale' in developing countries are as follows.

- i. Most educational projects and programmes, which introduce educational change in developing countries are funded by external donors. These projects and programmes can scale up quickly as long as the donors' funds are available. Sometimes the size of external donors' financial contributions is so enormous that the government cannot take over the whole budget after 5 or 10 years of implementation.
- ii. Sometimes the objectives of educational change is not clearly defined and/or informed to users. Consequently, the essence of the innovation is lost or distorted during the process of scaling up.
- iii. The personnel turnover rate is fairly high in many developing countries and the lack of institutional memories is also a serious problem.
- iv. A country's economic status changes over the period that affects the living standard of its population, especially in terms of education and health.
- v. The co-ordination of donors' input is significant in order to utilise the limited resources more efficiently and effectively. However, often different donors like to put their own flags individually rather than collectively.
- vi. The success of educational change depends on whether teachers understand the introduced ideas and change their ways of teaching. However, such behavioural change is difficult to achieve even in wealthy countries. It takes time even for innovative teachers to adopt new ways of teaching.

1.3 Research questions and aims

This study examines how educational change, using the CtC approach, can go to scale. The working definition of 'going to scale' or 'scaling up' is discussed in Chapter 3. My fundamental research question is;

How can educational change using the CtC approach go to scale?

To address this question, I have posed the following sub-research questions as the basis of this thesis;

- (a) How has the CtC programme using the CtC approach in Zambia gone to scale?
- (b) What are constraints and enabling factors of going to scale?
- (c) What are potential relevant models of going to scale?

To answer the questions above, this study reviews relevant literature on health education, educational change and Child-to-Child. This provides a theoretical framework of the research. Subsequently, it examines case studies of the implementation of the CtC programme in Zambia. Under these broad aims, the case studies examine how the CtC programme has been implemented and scaled up in Zambia. Through this examination, it also identifies some enabling factors and constraints in relation to going to scale. The models used within each case study are also used to identify and verify potential relevant models of scaling up educational change.

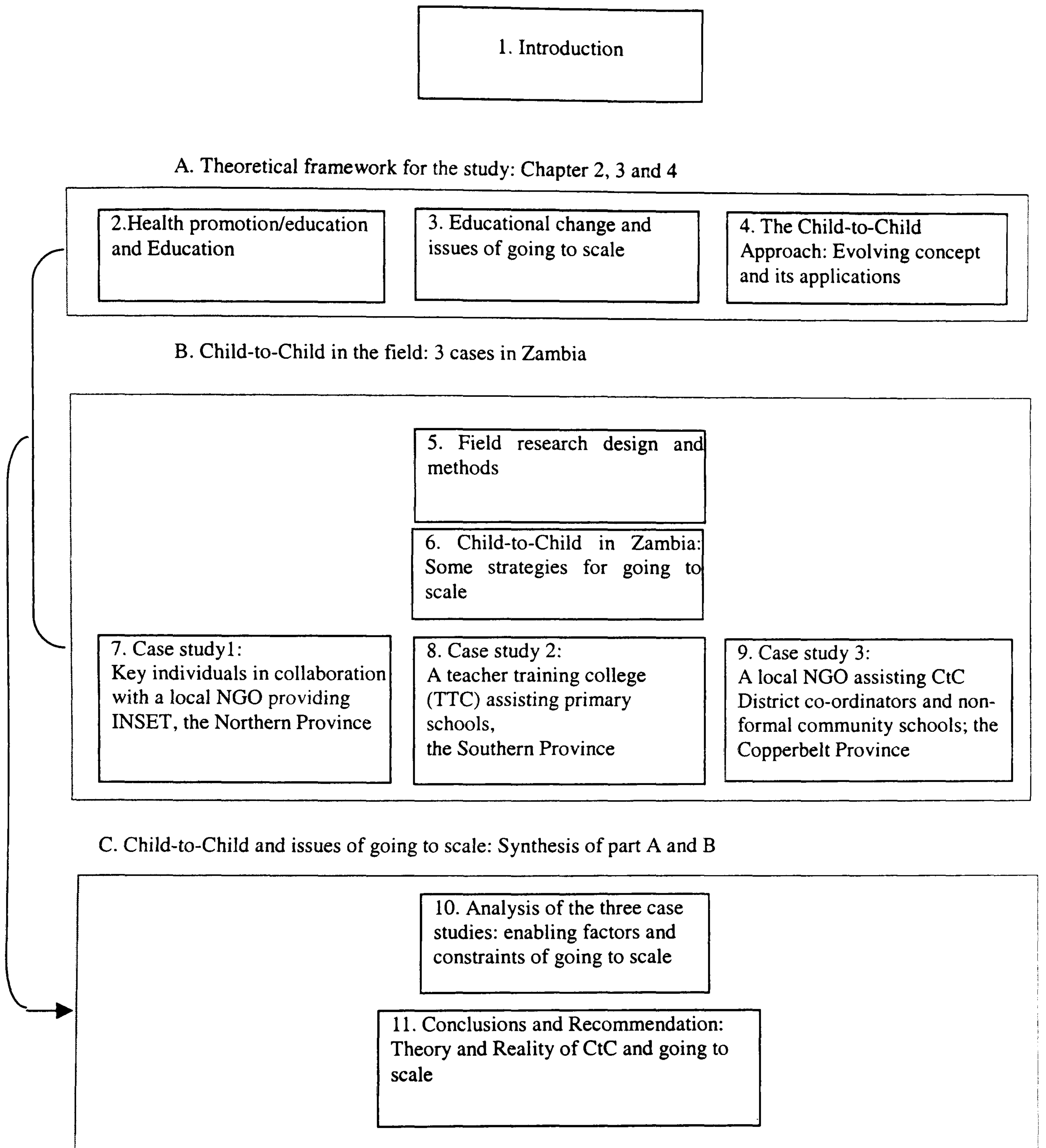
1.4 The structure of the thesis

This thesis consists of 11 chapters. The structure of the chapters is summarised in figure 1.1. After the introduction, the thesis is divided into three parts:

- A: Theoretical framework for the study: Chapter 2,3 and 4
- B: Child-to-Child in the field, three case studies in Zambia: Chapter 5 to 10
- C. Child-to-Child and issues of going to scale; synthesis of parts A and B: Chapter 11.

Chapter 1 presents the research questions and the rational behind the study. It also presents the overall structure of the thesis. Chapters 2, 3 and 4 provide the theoretical framework on health education, issues of going to scale in relation to educational change, and the Child-to-Child approach respectively. Chapter 5 explains the research methods and the rational to choose the implementation of the CtC programme in Zambia as a case study. Chapter 6 reviews the historical backgrounds of the CtC programme in Zambia and examines the efforts for scaling up the CtC programme taken by the national government, donors, NGOs and individuals. Chapter 7, 8, and 9 examine three case studies of scaling up the CtC programme in three different contexts in Zambia. Chapter 10 compares these three cases and analyses enabling factors and challenges for going to scale. This chapter synthesises the theoretical framework defined in Chapter 2,3 and 4 and the Child-to-Child programme in Zambia described in Chapter 5 to 10 and tries to identify potential relevant models of going to scale. Chapter 11, the final chapter summarises the findings in relation to the research questions. It also reflects the research critically and proposes some recommendations to donors and the government of Zambia.

Figure 1.1 Structure of the thesis



Chapter 2 History and development of health education

2.1 Introduction

This chapter seeks to bring clarity to the terms; health, health promotion and health education. For health promotion and health education to be recognised, a review of their histories explains their characteristics and the following section gives examples of three approaches to health education. Subsequently it examines some difficulties of health education. Having prepared the foundation for health education, the discussion turns to school health education and its rationales. It also studies some concepts related with school health education.

2.2 Health, Health Promotion and Health Education

Numerous definitions of the term **health** have been proposed by various individuals and organisations over the last 50 years. The World Health Organisation (WHO) defines health as not merely the absence of disease, but also as a state of complete physical, mental and social well-being (WHO 1994). It was, however, an unrealistic and unclear definition, since a state of complete well-being is hardly achievable. Even just focusing on the physical health, 'a complete healthy state' does not exist because the body's condition keeps changing. In addition, a fever, for example, can be a sign of health as the body is reacting soundly towards an infection, and it is impossible to eliminate every parasite. In 1997, WHO redefined health as the ability of an individual to achieve one's potential and to respond positively to the challenges of the environment (WHO 1997). This definition is more realistic to achieve.

Tones, Tilford and Robinson consider four major factors affect health status; (1) the health and medical services, (2) genetic endowment, (3) individual behaviours and (4) the socio-economic and physical environment (Tones et al 1990 pp. 3-4). As Hawes (1995) argues, a broad definition of health removes boundaries with other issues, for example, avoiding pollution and combating soil erosion are environmental, as well as health related issues. To elaborate on the wider definition of health, I understand it to concern; happiness: hopes: self-esteem: confidence: a sense of security: the capacity for consideration: the ability of understanding and accepting different culture and value systems: access to basic human needs including education and information: positive

attitudes towards oneself and others: and fulfilment of life. The sense of security includes a stable financial and employment status: the sense of being loved and needed: freedom of expression and choices of work as well as peaceful environments at home, at the work place, in the community, in the country and ultimately in the world.

In addition, even if people are in unhealthy environments, which they do not have power to control, they should still try to maintain their healthy mental status. For example, people in conflicts or war need to keep their hopes and optimism for the future. Everyone should learn how to deal with difficult circumstances and daily stress and problems wisely, as a part of health. This also applies to people with disease such as cancer, HIV/AIDS or with certain physical disabilities.

Health promotion is essentially combating the leading causes of premature death and health education is the centre of health promotion (Tones et al 1990). According to the Ottawa Charter on Health Promotion drawn in 1986,

“Health promotion is the process of enabling people to increase control over, and to improve their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realise aspirations, to satisfy needs and to change or cope with the environment” (Ottawa Charter cited in Hubley 1993, p15).

WHO acknowledges the following 3 points;

- Health promotion is an intersectoral activity. The responsibility for ensuring the necessary conditions conducive to health should be taken by various sectors including industry, transport and communications.
- Health and medical services should be reoriented to meet consumers needs, and to involve community participation. People must be helped to gain control over their own health.
- The physical and socio-economic environment is an important factor in determining health and illness. WHO is concerned with building public health policy and creating supportive environments

(WHO, cited in Tones et al 1990).

Health education is any combination of learning experiences designed to facilitate voluntary actions conducive to health (Green and Kreuter 1991, P.17). The relationship between health education and health promotion is symbiotic (Tones et al 1990). Health promotion consists of any combination of education and related legal, fiscal, economic,

environmental and organisational interventions designed to facilitate the achievement of health and the prevention of disease.

2.3 History of health promotion and education

Health education of the public began as a discipline of public health in the 1930's. It received more attention during the Second World War when the emphasis was to inform people about better nutrition and related health problems. The initial stage of health education was to offer information about topics such as diet and personal hygiene. It was also largely limited to the use of printed materials, posters and mass media.

In developing countries, initially such efforts focused on specific health problems such as hookworm control in the 1930s, safe water and basic sanitation in the 1940s and 1950s, and family planning more recently (Dhillon 1994). Child mortality under five years has been reduced dramatically through programmes of immunisation and control of diarrhoea. UNICEF estimates some 90% of children in developing countries now survive to reach school age (Bundy 1996).

The basic early efforts of health education slowly developed into the more comprehensive approach for fostering behaviour change and intersectoral actions for health. Over the years, the situation changed drastically and multifaceted strategies have been designed and applied in much larger scales than before. In 1977 WHO set up the goal Health for All by the year 2000 and health education is the key to achieve this (WHO 1988). The following year, the Declaration of Alma-Ata was endorsed and this became a milestone of global health actions. Also promoting the health of children through schools has been an important goal of WHO, UNESCO, UNICEF and other organisations since 1950s (WHO 1997, p.5). A series of international meetings and programmes have taken place to promote school health education. Issues of school health education will be discussed in section 2.4.

In USA, there was a shift in the health promotion strategy from health directed acts to lifestyle related acts in the 1970s and 1980s. In the late 1970s, health education was defined as a voluntary change in behaviour and hence its scope was limited to conscious health-directed behaviour. Health education seemed to work most effectively when people were clearly oriented to solve discrete and immediate behavioural or health problems. Patient and self-care education, various programmes on immunisation,

screening, smoking cessation, family planning were the examples of these single acts (Green 1991).

Meanwhile the Surgeon Generals Report on Health Promotion and Disease Prevention (1978) challenged the American public and professional health community to examine

- i. unpremeditated health-related behaviours and the community conditions of living that account for over 50% of the causes of premature death,
- ii. the policies supporting such behaviours and living conditions.

Among these, most important were substance misuse and addiction, poor diet, sedentary work and leisure and stress related conditions.

The term lifestyle, implying lifetime habits and the social circumstances, gradually became to be more important for health promotion. Lifestyles are, for example, eating high-fat foods, smoking a few cigarettes each day and travelling in heavy traffic without a seat belt. These lifestyles account for most of societies' disease, injury, disability and premature deaths. With these new targets of lifestyles, health education needs to be supported by other sectors, such as law, environment and regulation. Health education also requires more positive approaches to create health potential rather than to focus on disease prevention (Kickbusch, cited in Green 1991). Health promotion is now redefined as the combination of educational and environmental supports for actions and conditions of living conducive to health (Green 1991).

2.4 Three models of health education

There are various models of health education. Tones (1990) identifies the following three models;

- i. Preventive Model
- ii. Radical-Political Model
- iii. Self-Empowerment Model

Each of these shall be reviewed in turn.

2.4.1 Preventive model

The goal of the preventive model is to persuade the individuals to take responsible decisions. This is a traditional approach, which requires individuals and communities to actively choose to adopt a healthier lifestyle.

The critique of this approach considers the individual focus of the preventive approach is both unethical and ineffective in that it ignores the real socio-political roots of ill health. This is so-called victim blaming in which the people are blamed for adopting unhealthy lifestyles when society itself sustains the unhealthy habits.

“The holistic health movement along with positive health and high level well-being is required than leaving the responsibility to individuals. The phalanx of narcissistic, non-smoking, diet conscious joggers serves merely to distract attention from the true roots of ill health” (Tones 1990, p.9).

In particular, this preventive model lacks some important issues such as looking at the fundamental social and economic influences that may be the origin of disease, especially in developing countries. For example, a poor Indian woman cannot take her sick child to the hospital where free medical care is available. She has to make a choice between going to the hospital and letting her other children starve, or going to work in order to feed her family, even though the sick child will get worse and may even die (Nayar, cited in Kelly 1987).

Free medical care is not enough in many real life contexts in developing countries, but people need other enabling factors such as belief, time, transport, permission from their work place and the husband and social and cultural acceptance.

It is reasonable to expect people with full access to information and choices of lifestyles to assume the responsibility of maintaining their own health to a certain extent. Although a Kenyan child cannot be blamed for getting Malaria, most smokers do have the choice of not smoking. Although smoking can relieve stress, the responsibility of smoking related disease in rich countries is quite different from that of disease in the tropics. Moreover health conscious people should not be blamed for being 'narcissistic', and distracting attention from the true roots of ill health, as they strive to fulfil their own potential. Information concerning preventing ill-health should be disseminated to people along with providing facilities and environments which enable them to adapt healthy lifestyles.

2.4.2 Radical-Political Model

The radical-political model targets the roots of the problems of ill health, in other words, to achieve social and environmental changes by triggering political action. Its focus is not on the individual but on the various social, economic and political factors promoting unhealthy products and practice. Evaluation of this health educational model would include measures of public awareness of the ways in which certain commercial interests damage health (Tones 1990).

From consideration of this rationale, two points arise. First, in rich countries such as USA, industries provide unhealthy products partially because there are consumers. For example, processed foods with a high fat content have a detrimental effect on health, yet these are often the customers' preferred choice. In addition, the industrialisation of farming permits the mass production of cheap and uniform agricultural produce. However, this produce is typically with a higher chemical content than in organic produce. Although political actions are important towards more descriptions on food production, the individuals still need to make decisions on what to buy and how to choose them. Health education should give them the necessary guidance for their decision.

Second, in poorer countries if the health educators try to promote the public demands for policy changes, the government may not support their programmes and therefore it is not applicable especially in many developing countries. Moreover, such educators could be labelled as anti-government activists.

2.4.3 Self-Empowerment Model

This approach is from an educational model reflecting the Society for Public Health Education of Americas (SOPHE) goal of fostering informed choice. It claims health educators should value privacy, dignity and the worth of individuals and support change by choice, not by coercion (SOPHE 1976, cited in Tones, 1990, p.11). Broadly this approach should promote not only life skills such as stress management, but also the changes of self-views and self-efficacy beliefs. The beliefs include that it is possible to be in charge of ones life. It also promotes health positively as well as facilitating health choice. This aims at the same goal of the Radical-Political model; e.g. the acquisition of skills to work in groups, to organise and influence social and political systems. In short,

this model is concerned with promoting both self-esteem and a variety of social and life skills.

This model seems to be the most holistic approach among the three models reviewed. The Child-to-Child approach also emphasises the development of self-efficacy and self-esteem. Although it is difficult to evaluate changes of self-views, self-empowerment is fundamental for people to choose better lifestyles and to make decisions on their lives. Since such choices are made by them, it is more likely to be sustainable for a long term. While aspects of model 1 and model 2 have relevance, it is model 3 that is most appropriate in describing assumptions behind the CtC approach.

2.5 Difficulties in health education and behavioural change

There are a number of inhibiting factors for health promotion and education. One of them is that health workers do not have the latest and most accurate information. Also “even the so-called ‘experts’ do not always agree. The public can get very confused with conflicting messages and do not know which to follow. It is not surprising that they often become impatient and ignore us!” (Hubley 1993 p.13). From my personal experience in 1999, even in UK, advice on breastfeeding from midwives and health visitors was conflicting and sometimes wrong. Although their functions are to support mothers and babies, they ultimately created more stress than relief.

Hubley (1993) also argues that “often the health education does not take into account the underlying influences on health, contains irrelevant information, promotes unrealistic changes, is directed at the wrong people and uses inappropriate methods. So to promote health, it is important to determine the factors that underlie a person’s decision to perform or not perform a behaviour” (P.13)

Information alone does not always change behaviour and it is crucial to address enabling factors, changing beliefs and attitudes, subjective norms and social and peer pressures. This is applicable not only for people to change health related behaviours but also for schoolteachers to adopt new ways of teaching. However, often the Ministry of Education and donors do not take into account such underlining factors, and so fail to deliver meaningful educational change. The issues of educational change and teachers’ behavioural change will be examined in Chapter 3.

2.6 School health education

2.6.1 Advantages of health education through schools

“Worldwide, schools reach about one billion pupils and, through them, their families and communities. Therefore, the school is the developing world’s broadest and deepest channel for putting information at the disposal of families, school personnel, and community members as well as pupils” (Kickbush cited in UNESCO 1998 P.5).

Gradually health education has developed different approaches for various target groups. Especially school based health education has obtained an important role for health promotion. The decrease of child mortality and many countries’ efforts to achieve the basic education for all in recent decades resulted in the dramatic increase of children enrolled in primary schools. Overall 71% of children in the developing world are now completing at least 4 years of primary schooling (UNICEF 1995). 1000 million school age children today will be the future adults. Moreover, the school health programmes are one of the most cost-effective of public health intervention and are in a short list of five global public health priorities (World Bank 1993). In short, schooling can play a crucial role in health promotion as they can reach a large number of children who spend a considerable amount of their time at school during their formative years.

However, although the mortality rate declined, many children still face health problems that compromise their physical development, attendance at school and ability to learn. Children may have survived but if their quality of life is compromised by ill-health, they may not take full advantage of the educational opportunity (Bundy 1996). Ill health at school age can also have negative effects on their physical and socio-economic development. There is an urgent need to promote their health status in schools.

While people in the health sector find school health education as a vital tool in promoting health, health education has become more valued among people in the educational sector as well. If children are not healthy, they cannot learn properly in school and their results in poor academic performance, high repetition and dropout rates. Moreover health education is vital to children’s physical, psychological and social well-being (WHO 1997).

A number of international conferences have addressed the importance of school health education. For example, WHO has been holding a series of meetings concerning school health education since the 1950’s. Some of the major meetings include the WHO

“Expert Committee on School Health Services” in 1950, the UNESCO/WHO collaboration to publish “Planning for health education in schools” in 1966 and WHO “Expert Committee on New Approaches to Health Education in Primary Health Care” in 1983. Recently it held an inter-agency meeting of the WHO/UNESCO/UNICEF “Consultation on Strategies for Implementing Comprehensive School Health Education/Promotion Programmes” in 1991. This meeting resulted in forming an expert committee on Comprehensive School Health Education/ Promotion. More recently, WHO is supporting a concept “health promoting schools”. This will be discussed in the following section 2.6.2.

Also the World Declaration on Education for All clearly states that basic education must correspond to actual needs, interests, and problems, and the relevance of curricula such as nutrition, health and work should be enhanced (UNESCO 1990). Six years after the EFA conference, the emphasis still remains that to reach the unreached for achieving education for all, basic education should serve practical life skills and knowledge including health and nutrition which enhance the quality of life (UNESCO 1996).

2.6.2 Three components of school health programmes

School health programmes involve three main components, which are health education, a healthy environment and health services (WHO 1997, p.11). School health education should include academic skills, health and nutrition education, life-skills education and staff training. School health services should include “preventing ill health from happening, detecting problems and taking action early and managing ongoing problems to minimise their bad effects”(Hawes 1997 p.3). School health environment should include not only physical aspects such as safe drinking water and pit latrines but also social aspects such as children are trusted to be partners of health promotion. Health and educational professionals began to agree that school health promotion should be implemented through comprehensive and holistic strategies (WHO 1997 p.10). Some new concepts related to school health education have been evolved over the years. The following section will discuss some of these.

2.6.3 Some new concepts related to school health education

As school health programmes have evolved in last 40 years (WHO 1997), some new concepts and approaches of school based health education have been evolved as well. Some of them are;

- i. the Child-to-Child approach,
- ii. comprehensive school health education and promotion,
- iii. health promoting schools, and
- iv. life skills.

They are all deeply interrelated.

According to Kickbusch, Director of Health Promotion, Education and Communication in WHO, Health Promoting School is about: creating a model that shows we care about each other; reducing the fear of getting to school safely; the importance of providing safe water, sanitary facilities and healthy food; girls and boys, and women and men, treating each other with respect; preventing health problems and about changing conditions. It is about “what we want our world to be, now and in the future” (UNESCO 1998, p.5). In short, health promoting schools are exemplifying healthy environment and healthy relationships among children and teachers. Children can learn what the healthy community should be at schools and then work towards establishing such an environment out of schools.

The Child-to-Child approach is an approach to health education, which can be used in such health promoting schools. The CtC approach is an approach to health education, trusting children as partners of health promoters. It has been adopted in more than 60 countries all over the world since its establishment in 1979. Many national and international organisations including NGOs, UNICEF, UNESCO, WHO and UNFPA strongly support these programmes. The concept and applications of the Child-to-Child approach will be discussed further in Chapter 4.

2.6.4 Difficulties in school health education

This section identifies some of the difficulties of school health education. Despite the many advantages of school health education, identified above, often it is not seen as the first priority in schools in many countries.

“Political, social, health and education leaders, as well as the public at large, lack both sufficient knowledge about the potential impact of school health programmes to make them a priority and information about how to implement such programmes efficiently” (WHO 1996, p.3)

WHO (1996) identified some of the barriers to school health programmes at different levels from school, district, province, to the national and international levels. Some of the barriers include;

- Inadequate attention allocated to health in the academic period and in the school timetable.
- Lack of well-defined national strategies for the promotion, support, co-ordination and management of school health programmes.
- Scarcity of trained people to implement health programmes in schools.
- In the absence of a subject teacher (for health), health teaching at school has become everyone's responsibility and no one's business.
- Rapid turnover of health and education personnel and also political and economic changes.
- Lack of confidence for school administrators and teachers to introduce change into schools.
- Shortage of funds to train teachers health education.
- The communication gap between school personnel, parents and community members.

(WHO 1996, pp. 2-7, 22-27)

Many parents, teachers and even students think that primary schools should provide only knowledge required to pass examinations so that students can graduate to secondary schools. Although in many cases only a fraction of students can proceed with their secondary education, parents expect their children to be among them (Kelly interviewed on 16/2/1998). Health education is not, therefore, their priority unless the examinations include health topics.

Another difficulty lies in the nature of inter-sectorial efforts such as health education. In the central government, often the ministries of education and health do not collaborate with each other. In addition, at the community level teachers and health workers do not usually work closely and schools do not invite medical personnel to teach children.

Moreover, health education is different from other subjects in a school curriculum. Pridmore (1999) argues that

“This difference arises from the fact that to be effective information has to lead to action to improve health. This has lead some people to argue

that school health cannot be separated from community health and school health programmes need to respond to a demand from the community and be owned and shaped by the community” (31/7/99 personal correspondence).

It is therefore important to learn what each community’s demand for education is in order to decide what kind of school health education programmes should be implemented. Trying to satisfy the diversity of local needs will require teachers’ flexibility and creativity.

However, schools are following a standard curriculum provided by the Government. This diversity also makes both scaling it up and assuring its quality more difficult. Moreover, it is difficult to assess the outcomes of health education. As is discussed in Section 2.5, information does not always change behaviours.

2.7 Conclusion

This chapter examined some definitions of health, health promotion and health education. Health education is the essential component of health promotion. As primary schools can reach more than one billion children and also reach their families and communities, introducing health education into primary schools is efficient and beneficial to both children and adults. However, often health promotion and education programmes fail because they did not take into account underlying factors of local people such as enabling factors, personal and cultural values, social norms and pressures. To bring meaningful behavioural change to people, it is important to consider these factors. This is applicable to introducing educational innovations and reforms, which require teachers’ behavioural change. Issues related to educational change and teachers will be examined in the following Chapter. Some concepts related to school health education, such as health promoting schools and the CtC approach have been established in recent decades. Chapter 4 discusses the CtC approach and issues of its going to scale.

Chapter 3 Educational change and issues of going to scale

3.1 Introduction

There have been numerous innovative educational projects implemented in both developing and industrialised countries and much resource has been expended on these. Many of them, however, resulted in failure, as what was expected did not happen and many unexpected problems appeared instead (Havelock & Huberman 1977; Dalin 1978; Adams & Chen 1981; Lewin & Stuart 1991). There has been also analyses of successful cases which provide some lessons for the future (Fullan, 1991; Rohde; Chatterjee & Morley 1993; Little; Hoppers & Gardner 1994; Shaeffer 1994; Lynch; Modgil & Modgil 1997). After the World Conference of Education for All (WCEFA) in 1990, more resources have been allocated to innovative programmes on basic education. If we are to achieve EFA, more marginalised populations should be able to benefit from the successful educational change that provides better quality education.

This chapter reviews literature on projects aiming at educational change and the processes of their scaling up. I will especially look at educational projects and programmes in developing countries, which are mostly funded by external donors.

The chapter consists of two parts; A. Educational change and B. Issues of going to scale. In part A, the terms often used to describe educational change 'innovation' and 'reform' are defined as used in the context of this work. Subsequently it examines the aims and process of educational change. This provides a basis for a comparison of models of educational change. The following two sections discuss criteria of 'success' and factors of 'failure' of educational change.

In part B, the term 'going to scale' is defined. The following section examines where the demands of scaling up come from and in which stage of innovation the scaling up process starts. Subsequently, it discusses three major strategies of going to scale. The following section examines some models of scaling up. Since educational change often requires teachers to behave differently in classrooms, the next section studies some conditions that accommodate teachers' attitudinal and behavioural change. Finally it reviews two successful projects which have scaled up in Indonesia and China in order to identify some possible enabling factors of scaling up.

A project's scaling up in itself does not imply that the project was successful. There are many projects that expanded rapidly or started in large scales and resulted in failures (Rao 1997; Chambers 1997). It is therefore necessary to examine the outcomes of going to scale up as well as its process. If a project remains small, it is often easier to maintain its quality. However, the number of beneficiaries remains also small.

Part A. Educational change

3.2 Educational innovations, reforms and change

In general the term 'innovation' refers to a relatively small scale change at the local, institutional or national level, whereas 'reform' is intended to introduce a more pervasive and radical change, affecting major parts of the system (Courtney 1991). Fagerlind and Saha (1989) state that while innovations are usually specific to the educational system, educational reforms can involve changes outside the formal educational structure. They argue that religious, political and economic organisations can educate varying proportions of a population, therefore, educational reforms can involve these organisations which lie out of the formal education structure (pp. 145,146).

Yet the difference between reforms and innovations is not so clear in literature, for example, Havelock and Huberman (1977) describe many of the educational innovations in developing countries as involving a 'major system transformation' (p.15). Dalin (1978) also uses "the terms 'innovation' and 'change' as well as terms like 'renewal' and 'reform' more or less interchangeably. They all mean an improvement of existing practices" (p. 20).

In this thesis, I use 'educational change' as both educational reform and innovation that is aiming at positive change. Educational change is a deliberate and planned attempt to bring about improvement (Rodwell 1992) which often starts with a small scale project but sometimes develops into a large scale programme. In addition, given an increased tendency to value interdisciplinary approaches in the context of development, even a small scale educational change would go beyond the specific educational system and involve other sectors such as health and agriculture.

3.3 The dimensions and patterns of educational change

A number of countries require educational reforms and innovations urgently to resolve issues such as poor quality of education, high opportunity costs and untrained teachers (Adams & Chen 1981). Socio-economic and political pressures toward change are both from internal and external sources.

Dalin (1978, pp.20-21) argues innovative educational projects have four main dimensions;

- i.* objectives and functions
- ii.* organisation and administration
- iii.* roles and role relationship between individuals and among groups, and
- iv.* curriculum

He looks at which part of the education system that an innovative project aims at improving. In reality, many projects cover a combination of the categories mentioned above.

Havelock classified educational projects according to their processes, such as how they are formulated and how they spread. Havelock discovered three predominant patterns or 'perspectives' of innovation and planned change through his analysis of the literature. They were:

- i.* problem solving
- ii.* social interaction
- iii.* research, development and diffusion (Havelock 1969).

Havelock later introduced another pattern:

- iv.* linkage (Havelock & Huberman 1977, p.244).

Dalin (1978) calls these four as models of educational change (pp.67-74). There are other models proposed by various researchers (Chin and Benne 1969, Havelock & Huberman 1977, Lewin 1991). This section examines the four models mentioned above.

(i) Problem-solving

Under this model, “innovation is only a part of a problem-solving process which is going on inside the ‘user’, i.e. the community, the family and the individual” (Havelock & Huberman 1977, p.249). The problem solving process starts with a need, sensed and articulated by the user, which is translated into a problem statement and diagnosis. The diagnosis and identified problems provide the base for the user to formulate an innovation. Finally the user will adapt the innovation, try it out and evaluate it to examine whether it satisfying the expected goals (Dalin 1978 p.67).

The basic assumption of this model is that the local people “have within themselves most if not all the ideas, resources, and energy to bring about change. Outsiders may play some kind of facilitative role with temporary infusions of aid or technical assistance but such inputs are seen as mostly peripheral to the real change process”(Havelock & Huberman 1977, p.249).

Lewin (1991) also argues that “problem solvers may themselves be participants and clients of change guided and assisted by others” (p. 288). For example, in Stuart’s action research study in Lesotho, she defined her role as a facilitator and a commentator (Stuart 1991, p.134). The teachers in this study who worked with her themselves identified the problems and tried out the changed practices to respond to the problems. “They became more ‘reflective practitioners’ able to analyse their own problems and to try out action to overcome them” (Lewin 1991 p.288).

However, in reality, programme officers or consultants from the northern donors often play a role of solution providers through designing educational projects. The users and clients in the country need time and facilitation to articulate their problems and possible solutions. Also the clients have a variety of views and needs. However, the ‘facilitators’ who are often expatriates have often not spent enough time to identify the stakeholders and to listen to them. As a result, these outsiders carry out the situation analysis, which is often based on short trips in urban areas and dialogues with government officials. The analysis is not always accurate to describe the local people’s problems. In Pakistan, for example, some educational consultants repeatedly came to the country, however, they had hardly stepped into the classrooms or talked with teachers (Nishihara 1994).

In addition, even if the analysis of situation is appropriate, ‘providing solutions’ can be problematic. Some project designs are theoretically well written. However, they may not be feasible or effective in the local situations, such as lack of capacity in the local

government and no reflection of the needs felt by teachers at the school level (Kelly 1998). Also it is common to observe an optimistic cascade design of teacher training, in which provincial education officers receive a crash course of the innovation, and then they are expected to be able to train the district officers who are supposed to go on to train local teachers. This will be discussed further in Chapter 10.

A positive outcome is that over the last two decades, the view that local people know the problems and solution best has been increasingly predominant among involved individuals and donors. As a result, “participation has become a central theme in development”(Chambers 1998, p.xiii). This recent trend may lead to more substantive “problem solving” processes being carried out by local people.

(ii) Social interaction

The social interaction model emphasises innovations that are diffused to a social system. It stresses the importance of networks, personal contacts and social interaction, which spread the innovation. House (cited in Dalin 1978) points out that personal contact networks in education are essential for the spread of innovations. According to him, “ideas move along the social networks of personal acquaintance” (Dalin 1978 p.70). Elmore (1996) and Fullan (1991) also emphasise the importance for teachers to have personal interactions and direct observations in order to adopt new methods. They share the same view of social constructivists who argue that people learn best in a social setting (Good & Brophy 1995). This will be discussed further in section 3.11.

This model assumes information is a major source of motivation to try a new idea. The recent dramatic increase of computer usage is one of these examples. However information itself does not always cause behavioural change and this is frequently observed especially in health promotion. If information comes in a more personal way described above and the receivers can actually contact the resource persons whenever they like to, the innovation is more likely to spread effectively.

An example of this model is observed in an in-service training (INSET) programme in Kwa Zulu-Natal, South Africa (Harvey 1997). In this programme, a local NGO, provided classroom based INSET. The facilitator observed individual teachers’ lessons and provided feedback immediately after the lessons. Teachers could learn new teaching methods through personal interactions with the facilitator, based upon their own lessons. Harvey (1999) argues that teachers who received classroom-based coaching were

observed to make substantial changes, whereas the methods employed by most teachers who received workshops only remained similar to those in the control group who did not receive any workshop. This indicates that one-off training workshops, which aim at improving teaching methods are not likely to have impact on teachers. Yet, such workshops are repeatedly held consuming limited resources.

(iii) Research, development and diffusion

This model is based on several assumptions such as there should be a rational sequence in the evolution of an innovation. The sequence includes research, development and packaging before mass dissemination takes place. The model also assumes that there is a more-or-less passive but rational consumer who will accept and adopt the innovation if it is offered to him/her the first time at the right time and in the right form (Dalin 1978, pp.70, 71). This model made several contributions to education, mainly in the United States, including improvement of teacher education and development of new approaches to early childhood education. A main criticism of this model is that it tends to be an 'top-down' instruction that ignores the local values. Moreover, practitioners perceive their problems differently from researchers, consequently, the 'answers' provided by research may not work (Dalin 1978, p.71).

(iv) Linkage

This model combines the three concepts mentioned above. It connects 'self-user need' to social interaction and research and development. The assumptions in this model are that innovation needs to be carefully planned, based on clear and realistic objectives, dialogue between innovators, and high sensitivity to the user's actual situation (Havelock and Huberman 1977, p.246). In this model, the internal problem solving cycle is the essential starting point, however, the search for and retrieval of knowledge from outside sources also assumes great importance (Havelock and Huberman 1977, p.262). A criticism of this concept is that it overestimates the role that outsiders can play in motivating and advising local practitioners (Dalin 1978, p.73).

Although these models are mainly all based on neo-evolutionary theories and are developed in the United States, they have moved forward from abstract theories to being the basis for a more concrete caused of action (Rodwell 1991). However, whether the innovation initiators and implementers consciously apply these models in their practice is questionable. People who support contingency theory argue people-centred projects

cannot be implemented effectively through blueprint plans but rather through the processes, which evolve incrementally from learning and experimentation (Rondinelli; Middleton & Verspoor 1990). In addition, “different actors seem to behave according to the assumptions of different models and the same actors shift between them at different points in time” (Lewin 1991, p.291).

3.4 Process of educational change

There are three main stages in the process of innovative projects; 1) initiation, 2) implementation and 3) institutionalisation (Rodwell 1991).

- i. Initiation : pre-planning, identifying problem, need, project formulation and feasibility study, launching the project
- ii. Implementation : translating ideas into action, taking steps to make it happen, monitoring the project development and modification
- iii. Institutionalisation : sustaining the innovation, ensuring the quality and continuity of the project, evaluation and efforts for expansion

Among these stages, the initiation stage is very crucial. If a project is not planned realistically and does not reflect the needs of the target client, it may result in not achieving the original goals or wasting resources. Although various problematic factors may not appear until the implementation stage (Fullan 1993), if the planning is not appropriate, it can hardly be expected to produce the intended outcomes.

Also inter-donor co-ordination is important as some donors may fund and implement similar projects in the same region with slightly different formats. For example, I observed a few donor agencies developing different textbooks in the northern part of Pakistan. Also some donors had tried to change the curriculum at different times but at the end little change occurred (Nishihara 1994).

3.5 The criteria of ‘success’ of educational change

Lewin (1991) describes effective educational change as

“client-centred, purposive and evolutionary and it benefits the clients of education systems (students, parents, employers, communities) and those who work in them (teachers, administrators, planners and policy-makers)” (p13).

In reality, however, educational change is often not client-centred but rather centred on donors and the Ministry of Education. For example, teachers, students or parents rarely design educational projects or have their opinions listened to. As a consequence, educational change often confuses teachers rather than helping them.

In general, the success of an educational project or programme should be judged on whether it achieved its planned goals and effects. Some goals are difficult to measure especially where they concern teachers' and students' attitudes and behavioural change.

Moreover, it is often difficult to judge whether a project is a success or a failure even if we know both the planned and unexpected effects (Dalin 1978, p.10). Each project consists of some successes and failures, which may change in different phases of the project (Haffenden 1991, p.279). In short, success and failure is relative to time, to actor and to unit of analysis (Little et al 1994).

For innovations in other disciplines such as health, there are also some less obvious definitions of 'success'. According to Rohde, *et al.* (1993), success can be equated with a level of confidence among people to deal with their own health problems, with positive feelings about their own health and the health systems that serve them (pp.501-502). They emphasise community control, ownership of the project, self-reliance, pride and involvement in the planning and/or implementation as characteristics of success. Some of these elements are also common in education and other social development (Shaeffer 1994; Chambers 1997).

Furthermore, partnership across development sectors (health, agriculture, education) and across social institutions (government, NGOs, community associations, private and public enterprise) is a key issue for success (Hallak 1994). Lynch, Modgil and Modgil (1997, p.x) also emphasise the cross-sectoral and inter-professional approaches to innovations which recognise the interdependence of education, nutrition, health care and other sectors.

3.6 Obstacles to educational change

A number of obstacles and barriers to innovation have been identified (Havelock & Huberman 1977; Dalin 1978; Adams & Chen 1981; Hurst 1983; Lewin & Stuart 1991). For example, Havelock and Huberman (1977) identify seven barriers to innovation; 1) geographic, 2) historical, 3) economic, 4) procedural, 5) personal, 6) socio-cultural and

7) political barriers (pp.223-226). Since they described these barriers comprehensively, I will not repeat their lists and explanations. Instead, I highlight five critical issues, which are problematic in innovation;

- i. problems of nature of innovation
- ii. problems with human aspects
- iii. problems of project planning processes
- iv. unsustainable financial resources, and
- v. problems of monitoring and evaluations.

(ii), (iii), (iv) are also listed by Havelock and Huberman, and I suggest that (i) and (v) are also relevant.

3.6.1 Problems of nature of innovation

Many innovations are regarded as failures partly because of the nature of innovation. Lewin and Stuart (1991) point out that there is ‘the planner’s paradox’ of change. The paradox is that because innovation is disruptive, resource consuming and unevenly implemented, it may result in even less desirable outcomes. This effect is stronger in developing countries where fragile infrastructures are incapable of meeting existing demand (Little et al 1994). Lewin (1991) argues that

“high rates of change can, however, penalise those parts of the system that most need its benefits. Rural children and teachers in isolated, under-resourced, and neglected schools, with many unqualified teachers are those least prepared for change.” (p.16).

Ironically, as a consequence, those marginalised people are often left behind by innovation.

Adams and Chen (1981) argue innovation evolves according to its socio-political environment. Most innovations’ outcomes are unsatisfactory if they are evaluated ‘in terms of objectives’. It is therefore, necessary to measure not only how far objectives have or have not been achieved but also to measure an innovation’s ability to adapt to external changes.

3.6.2 Problems related to human aspects

For donor funding educational change in developing countries, Leach (1991) argues the human dimension of the aid work is crucial but often neglected.

According to Leach, “project success depends largely upon the local implementers. If they choose to withhold their co-operation, implementation cannot be satisfactorily achieved, even if the donor exerts great effort” (p.160).

Another critical human aspect is personnel change in the government and donor agencies. In one province in Pakistan, the Secretary of Education changed eight times in 22 months in 1993 and 1994 (Nishihara 1994). With such a frequent change of posting it is impossible to establish a long-term project with continuous commitments and supports. Mismanagement of human resources is also observed in external donor agencies both in headquarters and regional offices.

Moreover, at the school level, teachers are the centre of educational change (Fullan 1991). However, those enthusiastic teachers may be subject to some discouragement from their colleagues. Some head teachers and administrators are not always supportive to those teachers either. It is therefore necessary to create the environment and systems where those talented teachers can work fully (Elmore 1996). It is therefore important to take these human factors into account.

3.6.3 Problems of project planning processes

The initiation stage of a project is often problematic especially when external personnel design it. When external consultants fly into the country to formulate projects, they tend to stay there for a very short period. They are likely to rely on the information from the large cities and from the elite in the government, rather than teachers and students (Nishihara 1996). They are required to make hurried decisions to draw project plans through ‘development tourism’, a short trip from the North (Chambers 1983). As Chambers (1997) describes, they are far away from local, complex, diverse, dynamic and unpredictable rural realities (p.31). And when the marginalised population’s interests and motivations are not included in the project, it rarely leads to durable change (Lewin 1991, p.13).

From my observation in Pakistan, some projects are manipulated by private companies for commercial reasons and so do not meet the local needs. This is a cause of the

situations in which people sometimes do not know “why the programme was initiated in the first place” (Dalin 1978, p.7). In addition, donors have their own agendas and constraints, which cannot always provide adequate conditions to formulate or implement projects (Nishihara 1994).

Kemmerer (1990) also argues that

“neither the host country representatives nor the donor has any incentive to reveal their true preferences; the host country representative is required to identify means to finance recurrent system costs and the donor may be obligated to commit a certain percentage of his or her agencies’ resources to education” (p.245).

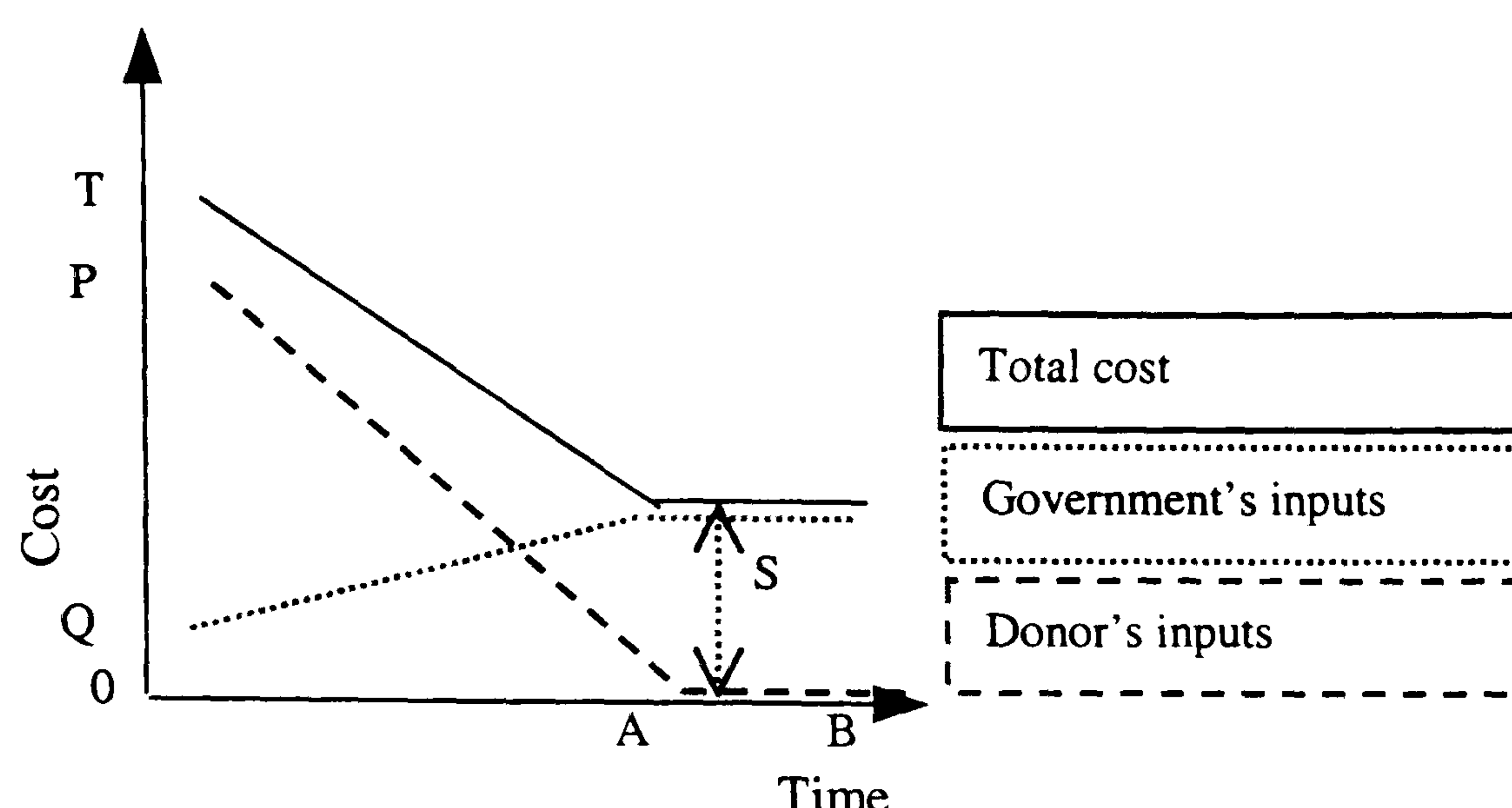
This relates to the following issues of resources.

3.6.4 Unsustainable financial plans

The implementations of some educational innovations are stopped as soon as external funding and technical assistance is withdrawn. Consequently their achieved outcomes are not sustainable. A typical theoretical framework for a project is that an external donor provides the major financial resources for establishing the project office and training key personnel at the initial stage, then gradually the government would take a progressively larger share of the costs. At the end of the project cycle, the government should take over the entire recurrent cost if needed.

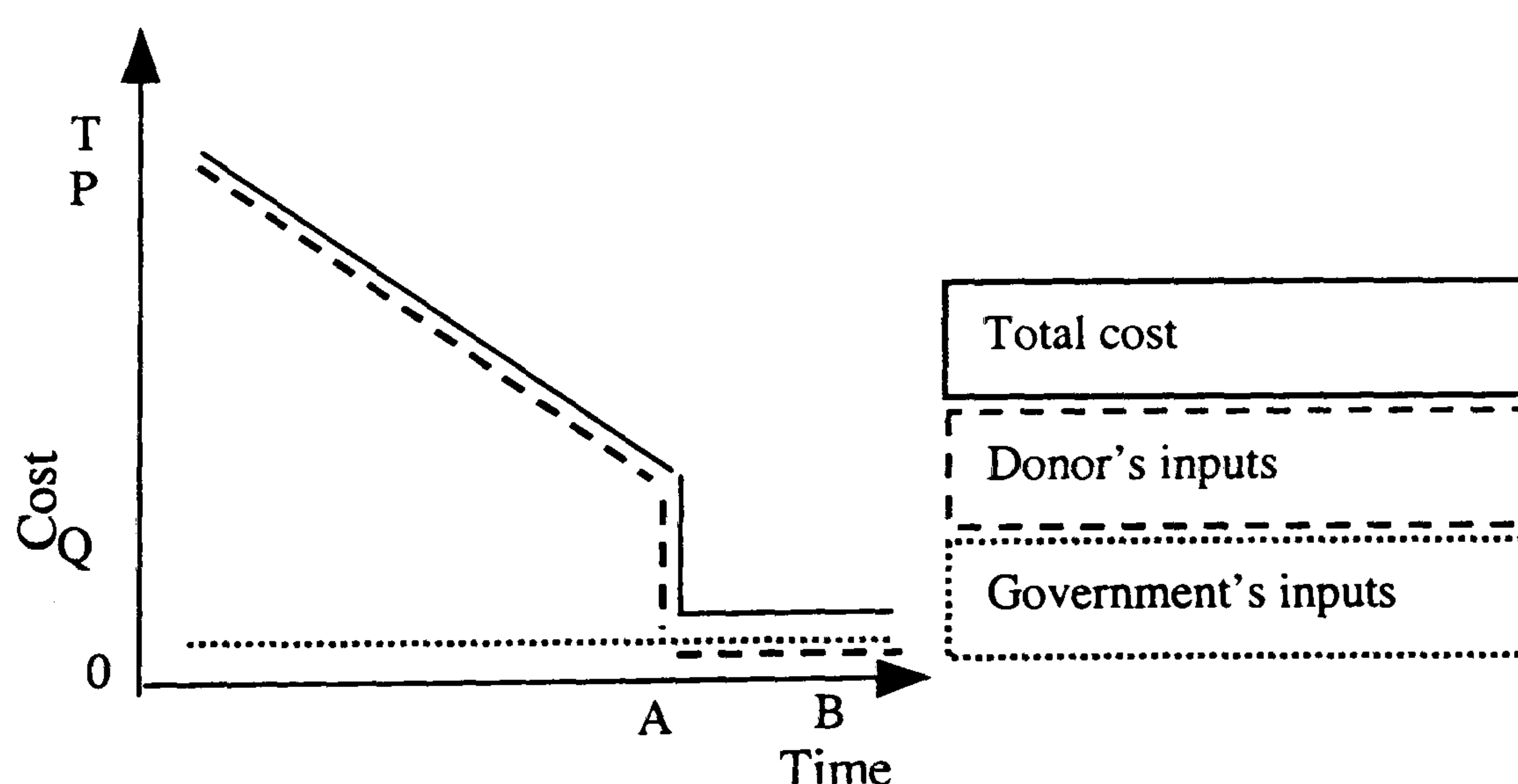
Figure 3.1 describes this theoretical relation between donors’ and government’ inputs over the project period A. At the beginning, the donors’ inputs are amount P, whereas the government contributes amount Q and the total cost T is the sum of P and Q. The less is the difference between P and Q, the more sustainable, as at the end of the project, the government should be able to take over the whole costs S which sustain the change. Normally the initial stage requires funds including training the staff, setting up the office or material development, therefore, the total costs should decrease over the project period.

Figure 3.1 Theoretical financial inputs from donors and the government



In reality, however, the funding situation is more like that illustrated in figure 3.2 than figure 3.1. At the initial stage, the government financial inputs are rather minimal or in kind, whereas donors cover almost the whole costs. When the project ends at the period A, donors stop funding, and the government cannot cover amount S to sustain the change. As a result, the drive for educational change stops. This happens especially when “host country nationals may agree to a particular project not because of conviction towards intrinsic merits but because of system need for resources” (Kemmerer 1990 p.244).

Figure 3.2 Financial inputs from donors and the government



3.6.5 Problems of monitoring and evaluation

Monitoring and evaluation are important both during and after the project period. In general, donors and governments tend to underestimate the complexity and the slow

nature of innovation, however, there are numerous unpredictable interruptions which deteriorate the whole process (Adams & Chen, p.276). Monitoring and evaluation help them to understand the status and needs of a project during implementation. However, monitoring and evaluations are often carried out by outsiders, which require large budgets. Often such budgets are not planned and many projects are hardly monitored nor evaluated after the project periods (Nishihara 1994).

How and when the evaluation is conducted is also critical to understand the real outcomes of educational change. Shaeffer (1994) emphasises as follows;

“The ultimate judgement of going to scale should not be made only on the extent to which the original model is replicated or even the extent to which the original sites of the innovation remain ‘pure’. Rather, the success of an innovation should be assessed over time, often many years after the event, when the often more enduring secondary effects or more unanticipated consequences finally emerge” (Shaeffer 1994, p.S-4)

This is particularly relevant to assess educational change using the CtC approach as ‘more enduring secondary effects’ are often subtle but may have important impacts on teachers and children. These effects are similar to Chambers’ “benign viruses” (Chambers 1995, p.59), which will be discussed in section 4.6.2.

In addition to the five main factors discussed above, when innovations fail, the cost concerns not only the resources of money, people, time and equipment, but also social costs.

“When innovation begin, hopes are raised, enthusiasms engendered and actions motivated. But then if failure follows, the major products become disappointment, disillusion, suspicion and despondency. The original problem remains unsolved but additional new ones have been created” (Adams & Chen 1981, pp.3-4).

In other words, the more the educational officers and teachers are exposed to unsuccessful innovations, the more difficult it becomes to introduce a new one.

B. Issues of going to scale

3.7 Definitions of going to scale

Defining ‘scaling up’ or ‘going to scale’ of educational change is not a simple task for two main reasons. First, limited research has been carried out on issues of going to scale

in educational change. Second, going to scale involves various aspects so it is defined in several ways.

While limited literature examining the definition and processes of going to scale is available, NGOs seem to have more urgent interest in this subject than huge multilateral and bilateral organisations. Edwards and Hulme (1992) argue NGOs have achieved many small successes, but “the systems and structures which determine the distribution of power and resources within and between societies remain largely unchanged” (p.13). As a result, “their projects remain islands of success in an all-too-hostile ocean” (p.13). Also often “if you happen to live in the community where an NGO is working, you can get everything, but you happened to live in the next community, you get nothing” (McLaughlin, Interview 22/7/97). In addition, an NGOs’ success is often judged by their project scaling up so that it attracts more funding.

To define ‘going to scale’ or ‘scaling up’, various people look at its different aspects in relation to NGOs. Some use the term ‘scaling up’ to describe ‘increasing impact’ (Edwards and Hulme, 1992, p.14). ‘Impact’ of educational change would involve qualitative change, such as behavioural change of teachers and students. While Myers (cited in Edwards and Hulme, 1992) defines scaling-up as “reaching as many people as possible with services or programmes”. In other words, there is an increase in quantity. Clark (sited in Edwards and Hulme, 1992) differentiates between ‘project replication’, ‘building grassroots movement’ and ‘influencing policy reform’. Similarly Howes and Sattar (1992) separate organisational or programme growth from achieving impact via transfers to, or catalysing other organisations.

Going to scale, therefore, involves different aspects of change. In this thesis, the working definition of going to scale is that it involves at least three aspects of changes, namely; (1) system change, (2) quantitative change and (3) qualitative change.

(i) System change

System change concerns structural and legal changes. Clark’s (1992) “influencing policy reform” is part of system change. Some examples of system change are a new curriculum is developed and adopted, more funds are allocated to implement the educational change or some incentive systems are introduced. The central government’s approval and support are especially crucial as this gives the legitimacy of the educational change. However, introducing something innovative in the central curriculum, for

example, does not always mean this innovation has actually an impact on teaching and learning in schools. This is discussed further in the following section.

(ii) Quantitative change

As is defined by Mayers (cited in Edwards and Hulme, 1992), going to scale is often measured by quantitative change such as increases in the number of schools, students, teachers and also administrative units such as districts and provinces. The number of textbooks published and distributed and number of workshops held are also in this dimension. However, there is a danger that such quantitative increases do not always indicate qualitative change. For example, the reached coverage of in-service teacher training does not indicate a real term change in methodology schools or classrooms. Similarly, the number of new textbooks produced does not always indicate the number of textbooks actually used in the classrooms. Sometimes these books are in the head teacher's cupboard, or teachers simply do not use them for various reasons.

(iii) Qualitative change

The qualitative change involves behavioural change, such as: whether teachers have actually changed their teaching methodology in the classroom after receiving the training; whether teachers actually use the new textbooks; and whether children have increased confidence to improve their health. These behavioural changes are difficult to measure, but often more crucial than mere quantitative increases or system change. Elmore (1996) argues that although schools are constantly 'changing' by adopting new schedule, curriculum or textbooks, what teachers and students actually do when they are together in classrooms remains the same. He claims that at the peak of reform periods in USA, the proportion of enthusiastic teachers who change their ways of teaching is about 25 % of the total. If what teachers and students do in classrooms' is to change in response to educational change, it requires teachers' behavioural change. Fullan (1991) also points out that "real change involves changes in conceptions and role behaviour, which is why it is so difficult to achieve" (p.38). As is discussed in section 2.5, in Chapter 2, to encourage people to change behaviour, it is important to take into account enabling factors, existing beliefs and attitudes, subjective norms and social and peer pressures.

Gaventa (1998) analyses scaling up of participatory approaches in a similar manner to above, as he points out three dimensions of change (p.155). They are the following;

i. **Scaling out or increase in the types and quality of participation**

This refers to the expansion of participation from one activity such as appraisal, to the involvement of people throughout the whole development process.

ii. **Scaling up or expansion of quantity of participation**

This refers to an increase in the number of participants or places where participation will occur.

iii. **Institutional change**

This refers to the shift required in and among larger-scale institutions for scaling out and scaling up to occur effectively. More specifically, it refers to the ways in which larger-scale institutions in government or the civil society will interact with smaller-scale organisations or communities in the participatory-development process.

(Gaventa 1998, p.155)

3.8 Indicators of going to scale

As going to scale involves various dimensions, it would be useful to consider the possible indicators. The indicators come under the three aspects of going to scale mentioned above; (1) systems, (2) quantity and (3) quality. Naturally these indicators need to be decided according to the aims and objectives of the project. Also in reality, they should be used in combination. Therefore, the following list is some examples for consideration, however is not exclusive nor always appropriate.

(i) Indicators in system change

- Whether a project is adopted by one higher administrative level. For example, a project starts in a school or a cluster of schools in a district and the district educational authority takes up the project and implements it through out the district, then the provincial government takes it up, and eventually the national government takes up the project.
- Whether a project received full approval from the government and so gained legitimacy.
- Whether a new curriculum is introduced in the central and/or provincial level.
- Whether a new examination is introduced in the central level.

- Whether new posts are created and more funds are allocated to implement the project and some incentive systems for the educational change are introduced.

(ii) Quantitative indicators

- Increase in the number of regional units, which are involved with the project, for example, counties, districts and provinces.
- Increase in the number of schools involved.
- Increase in the number of teachers trained.
- Increase in the number of new teaching and learning materials produced, distributed and used.
- If the project aims at introducing health across the curriculum, increase in the number of health topics.
- Increase in enrolment rates and attendance rates, and decrease in dropout rates etc.

An example of quantitative scale up is provided in the Andhra Pradesh Primary Education Project (APPEP), the state of Andhra Pradesh is the target region for implementing the project. Since there are 23 districts with the population of 66.3 million in the state, the project started with 9 districts in 1989 and 1990, 8 more districts joined in 1990 and 1991, then the remaining 6 districts joined in 1991 and 1992. The number of schools and teachers that joined the project increased accordingly (Ravi and Rao 1994, pp. 24-27). However, this kind of quantitative change does not always indicate that there has been either a sustainable system change or qualitative change in the classroom level.

(iii) Qualitative indicators

- Whether teachers have changed their methodology in classrooms.
- Whether teachers actually use the new textbooks.
- Whether the school environment has become safer, and children and teachers feel happier to be there.
- Whether children have more time to discuss and learn each other in and outside of classrooms.
- Whether children have become more collaborative and gained more confidence.

- Whether parents have become more involved with the school activities and decision making processes.

Among these, the most difficult but also most crucial indicators are (3) qualitative indicators. Some of difficulties arise from selection of the indicators, selection of evaluating methodology and analysis of the gathered data.

3.9 Process of project scaling up

3.9.1 Who wants scaling up?

When an educational project is initiated, no matter whether it is by a national government, a local NGO, an external donor or a combination of these, there is often a demand for scaling up. The demand comes from different groups of people; 1) the initiator of the innovation such as a national government, local or international NGOs and external donor organisations; 2) the local schools; 3) international initiatives such as Education for All and Health for All.

(i) The initiator of the project

When projects start as a pilot for the foreseen wider application, by definition, they need to be able to scale up. When the national or regional government initiates such a project, it is interested in a successful pilot so that its model can be applied to other areas and more population can benefit from it. The risk here is they may try a widespread application in a rushed manner without careful planning and consultation (Havelock & Huberman 1977, p.284). If it is supported by an external agency, the government may be able to develop the second and further phases with more technical and financial supports. A project can be initiated by a local or even an international NGO who is interested in implementing a project which can achieve a high reputation so that it would receive more funding from its supporters.

(ii) Local schools

Local schools and communities would demand the expansion of the project into their own areas when they hear about the benefits. The Child-to-Child project in Uganda and the Jinlin project in China are these examples (Harrison, interview on 3/6/1997; Ordonez & Montana 1996). This corresponds to Havelock's social interaction model and the

process of spontaneous participation in the project contributes to its sustainability. This helps the applicant schools prepare even before they join. On the other hand, it is a time consuming process and if there is no motivated personnel in a school, the students cannot benefit from the project. Moreover, it is these schools without such personnel that are mostly in need of quality improvement.

(iii) External donors to achieve Education for All (EFA)

Some external pressure for scaling up comes from international and bilateral donor agencies especially when the project is concerning basic education. They are eager to follow up and support Education for All (EFA) projects and so some call ‘donor driven initiative’ to refer to EFA (Hallak 1994). A number of governments and donors are engaged in both expansion of the access to education and improvement of quality. Similar efforts are observed in the health sector for achieving HFA after the Alma-Ata conference in 1979.

3.9.2 Where does it scale up from where?

Schematic representations of where an educational innovation starts and how it goes to scale in a country are given in figure 3.3 and 3.4. The figure 3.3 shows the national hierarchy of the education system and how educational change can go to scale. The figure 3.4 represents three patterns of scaling up. They are applicable in developed countries to some extent, however, the funding is provided from within the countries in most cases.

In some developing countries, such as Zambia, external donors fund almost all the educational projects. These donors support different levels of the educational hierarchy, from the central government to the school levels. In general, multi- and bi-lateral donor agencies tend to support the central government whereas international NGOs tend to support local NGOs.

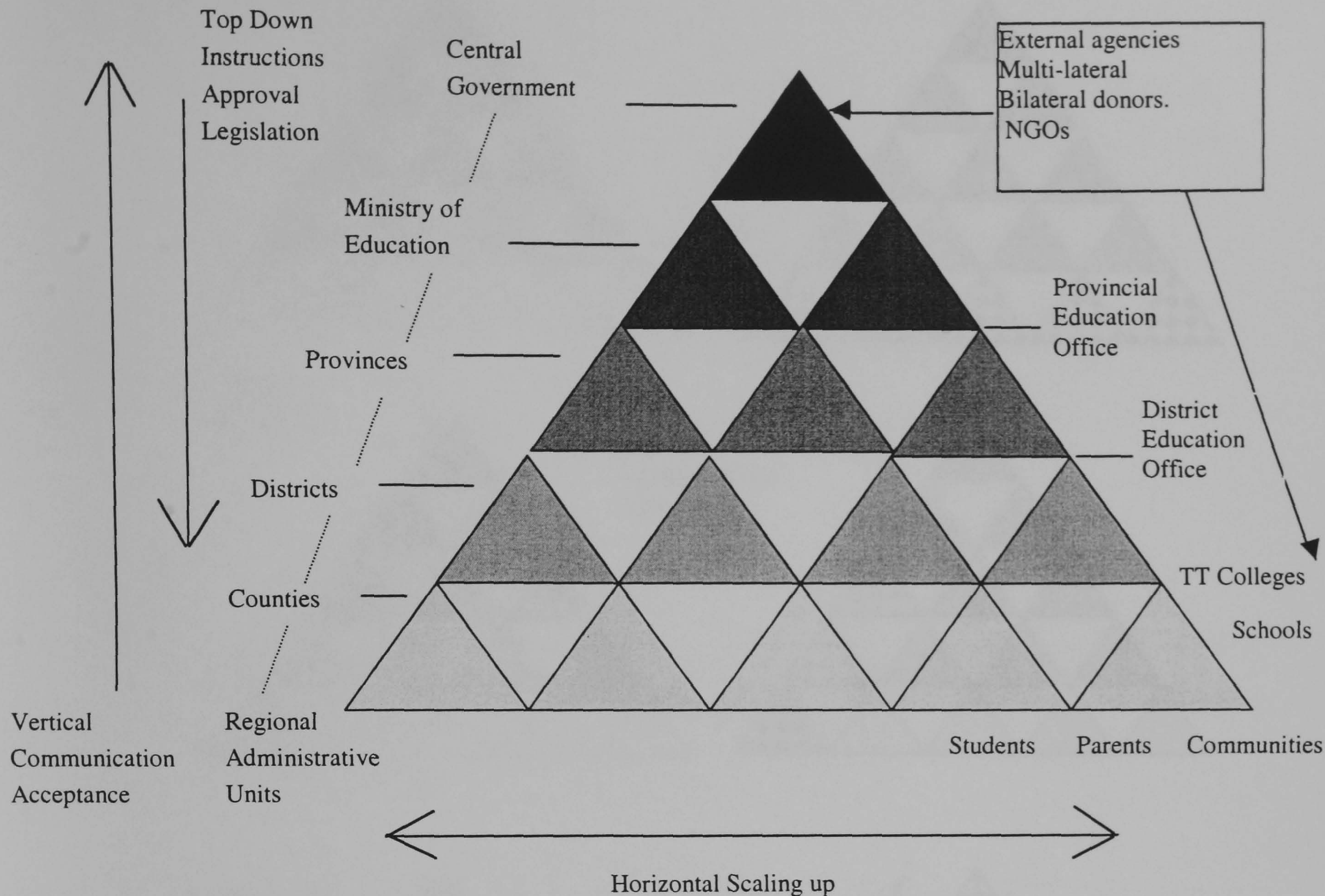


Figure 3.3 Administrative hierarchy and a project scaling

In figure 3.3, levels of triangles represent the educational hierarchy in a country. The dark colour shows concentration of power in decision making. The highest triangle represents the government that normally holds the largest power over creating overall policies and distributing budgets. Often the president is on the top point of this triangle. The one triangle below is the Ministry of Education in the central government. The triangles below represent provinces and provincial education offices based on this level. The districts and district educational office are in the next level of triangles. The triangles in the lowest level represent counties and communities where schools and teacher training colleges exist.

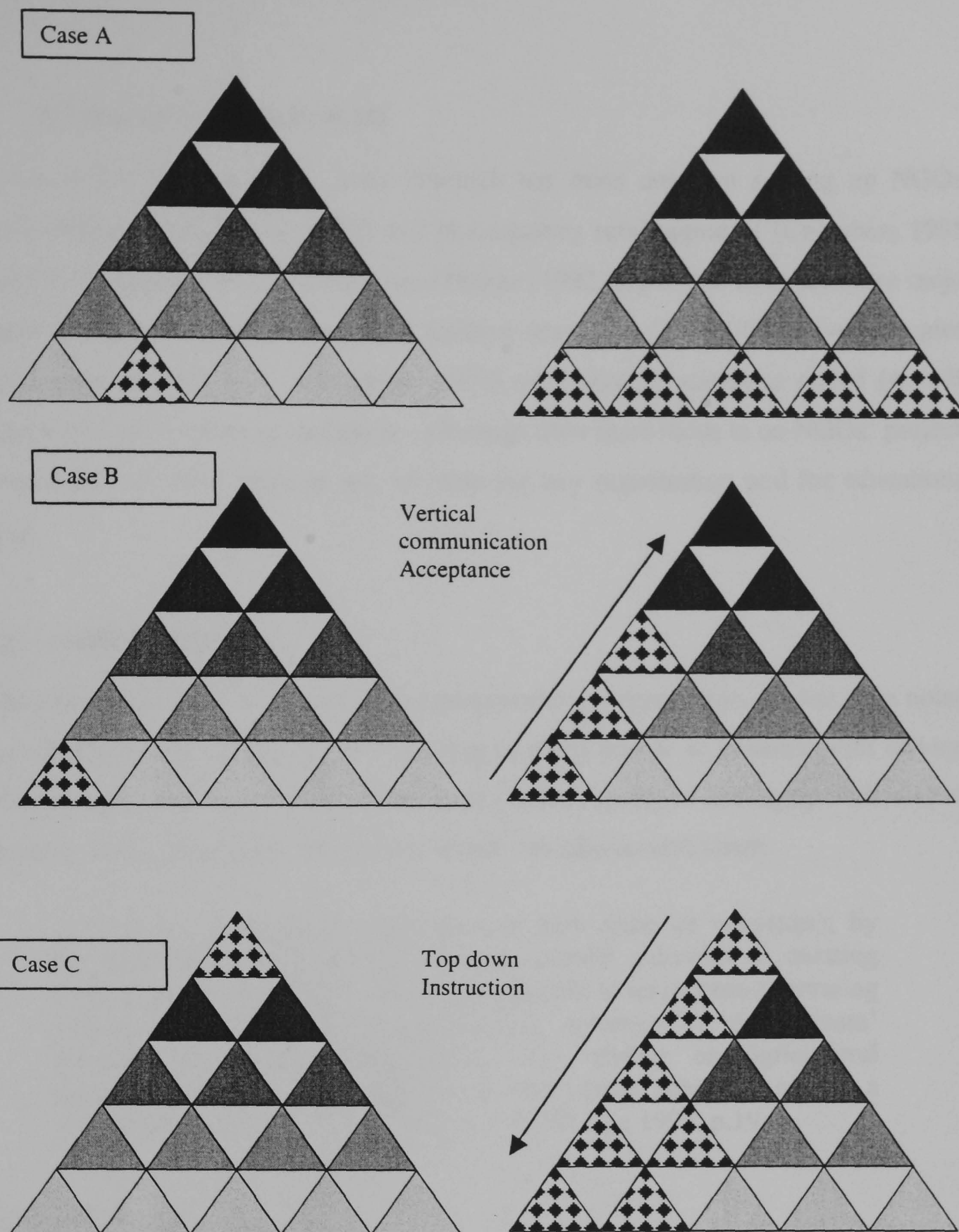


Figure 3.4 Three patterns of scaling up in the administrative hierarchy

Pattern A: Educational change can start from a classroom or a school level and then gradually diffuses into other neighbouring schools. Even within one school, a few teachers may be innovative and their colleagues would gradually opt in to the innovation.

Pattern B: Educational change starting from a classroom or a school level can also scale up through the hierarchy by gradually being accepted by the higher administrative offices. Often NGOs support this kind of innovations, then they receive publicity over the period. Some times Pattern A and B happen simultaneously.

Pattern C: This is the most common case with educational projects carried out by the government and funded by the external donor agencies. The government and donors plan educational change then implement it in the country. It starts with pilot regions and then expands to all the country.

3.10 Strategies of going to scale

As is discussed in section 3.7, some research has been done on scaling up NGOs' projects (Edwards and Hulme 1992) and participatory rural appraisal (Chambers 1995, Blackburn & Holland 1998). Edwards and Hulme (1992) argue that there are three major strategies for going to scale, namely; (1) additive strategies; (2) multiplicative strategies; and (3) diffusive strategies. Chambers (1992) adds another strategies called (4) self-spreading and self improving strategies. Although their main focus is on NGOs' projects in various sectors, their findings are valuable for any organisation and for educational projects.

3.10.1 Additive strategies

This implies an increase in the size of the programme or organisation. As has been noted, Myers (1992) defines scaling-up as "reaching as many people as possible with services or programmes". With this definition, the most obvious model of scaling up with additive strategies is direct programme expansion, which can take several forms.

"It may be geographical (moving into new areas or countries); by horizontal function (adding additional sectoral activities to existing programmes, e.g. adding a housing component to an income-generating programme); by vertical function (adding 'upstream' or 'downstream' activities to existing programmes, e.g. adding an agricultural processing project to an agricultural production scheme); or, by a combination of these forms" (Edwards and Hulme 1992, p.19).

3.10.2 Multiplicative strategies

This does not imply growth of programmes or organisations but it achieves impact through deliberate influence, networking, policy and legal reform or training. This includes catalysing other organisations and lobbying as well. Especially for NGOs, it is important to work with governments that are largely responsible for providing the health, education, agricultural and other services which people rely. Governments "remain the determinant of the wider political changes on which sustainable development depends. Some would argue that only governments can do these things effectively and equitably" (Edwards and Hulme, 1992, p.16).

3.10.3 Diffusive strategies

With these strategies, spread is informal and spontaneous. As Ordonez (1997) described in the Jinlin project in China, pilot model schools show some successes such as better academic performance and attendance rates by introducing more relevant contents to the lives of their students. Other schools near by looked into these successes and prepared to join the project.

These strategies are supported by the diffusion theory that is attempting to explain why a particular society adopts new practices and ideas. The communication of innovations includes four identified key elements, namely (1) an innovation, (2) which is communicated through certain channels, (3) over a period of time, (4) to members of a social system (Schramm and Lerner 1978 cited in Macdonald 1992). Diffusion of innovation is discussed further in the following section 3.11.

The advantage of diffusive strategies is that since the spread depends on demands from parents and teachers of other schools around the models, they take initiative and have the ownership. However, the disadvantage is that the innovation does not benefit those schools where there is no personnel who take such spontaneous action to opt in.

3.10.4 Self-spreading and self improving strategies

This category of strategies is to develop, spread and improve new approaches and methods, such as participatory rural appraisal. Chambers (1998) argues that these strategies can be both multiplicative and diffusive as spread of an approach or method can be multiplicative through deliberate training or networking; or it can be diffusive, occurring informally.

“Self-improving is used to describe approaches and methods which have improvement built into them, so that they should, from their very nature, get better and better the more they are used” (Chambers 1998, p.40).

Chambers (1998) emphasises that it is not possible for people to use a new approach without making mistakes. As long as they learn to self reflect and embrace errors as an opportunity to learning, their practices should improve. It is a necessary process of trial and error.

This strategy is highly relevant to educational change that requires teachers to acquire new approaches and methods in their teaching. When using the Child-to-Child approach,

for example, many enthusiastic teachers in Zambia have tried various activities then improved their teaching by self-reflection. This will be discussed further in Chapter 10.

Edwards and Hulme (1992, p.15) state that these categories are not intended to be wholly self-contained and there is a good deal of overlap. Some projects combine support for local-level initiative with lobbying at the national level, for example.

Section 3.7 discussed the three aspects of change in going to scale; quantitative, system and qualitative change. The additive and diffusive strategies are useful to increase the quantity, whereas multiplicative strategies can enhance the system change. Chambers' self-improving strategy is valuable for qualitative change such as behavioural and attitudinal change.

This section discussed the general strategies of scaling up projects and innovative approaches in various disciplines. The following section examines the characteristics, which affect the adoption rates of innovations and the characteristics of adopter categories in a social system.

3.11 Diffusion of innovation

3.11.1 Characteristics of innovations that affect the adoption rates

As is discussed in the former section, the diffusion theory is useful to understand why a particular society adopts new practices and ideas. Some innovative ideas and practices are adopted more rapidly than other innovations. Rogers (1983) identifies some major characteristics of innovations that affect the adoption rates through diffusion. They are relative advantage, compatibility, trialability, observability, and complexity.

“Relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes” (Rogers 1983, p.16). Rogers (1983) argues that in general, people rely more on subjective perceptions of the advantage of innovation than on ‘objective’ and ‘scientific’ advantage to decide whether they adopt the innovation. Although scientific evaluation is important for people who adopt the innovation earlier than others, the majority relies on subjective evaluation from their personal networks.

“Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters”(Rogers 1983,

p.16). . Thus an idea which is not compatible with the local values and norms will not be adopted as rapidly as an innovation that is compatible.

“*Complexity* is the degree to which an innovation is perceived as difficult to understand and use”(Rogers 1983, p.16). Naturally, an innovation that is easy to understand can be more readily adopted by people. Innovation that requires the adopter to develop new skills and understandings is adopted more slowly than simpler ones.

“*Trialability* is the degree to which an innovation may be experimented with on a limited basis”(Rogers 1983, p.16). New ideas that can be tried partially will generally be adopted more quickly than innovation that are not divisible. For example, a farmer can try hybrid-seed corn at the part of his land and compare its harvest with the ordinary one. An innovation that can be tried reduces uncertainty to potential adopters, as it is possible to learn by doing.

“*Observability* is the degree to which the results of an innovation are visible to others. The easier it is for individuals to see the results of an innovation, the more likely they are to adopt”(Rogers 1983, p.16). Rogers (1983) provides an example of solar panels on a household roof, which are highly visible. The solar panel adopters are often found in spatial clusters with three or four adopters located in the same block in California. Other consumer innovations such as videotapes are less observable, and thus may be adopted more slowly.

“In general, innovations that are perceived by receivers as having greater relative advantage, compatibility, trialability, observability, and less complexity will be adopted more rapidly than other innovations”
(Rogers 1983, p.16).

The relevance of these characteristics in relation to scaling up the CtC approach in Zambia will be examined in Chapter 11.

3.11.2 Adopter categories of innovations

When a new idea is introduced in a social system, people adopt or reject it at different times. Rogers (1983) categorised adopters into five categories on the basis of when they first use a new idea. These categories with their approximate percentages are; innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%) and laggards (16%). In general, the earlier adopters hold higher socioeconomic status and have higher levels of achievement motivation than later adopters.

An innovator is often perceived as a deviant from the social system and therefore is not likely to be effective in persuading others about innovation. On the other hand, early adopters, who have the highest opinion leadership among all the categories, provide information and advice about innovations to many in the social system. They are sought by change agents to be a local missionary for speeding the diffusion process (Rogers 1983 pp.246-247). Change agents influence clients' innovation decisions in a direction deemed desirable by a change agency,

“Because early adopters are not too far ahead of the average individual in innovativeness, they serve as a role model for many other members of a social system. The early adopter is respected by his or her peers, and is the embodiment of successful and discrete use of new ideas. ... So the role of the early adopter is to decrease uncertainty about a new idea by adopting it, and then conveying a subjective evaluation of the innovation to near-peers by means of interpersonal networks” (Rogers 1983, p.249).

It is therefore, useful to identify such early adopters in a society who have readiness to adopt innovations and to exemplify successful cases to their peers. With reference to educational change, there are enthusiastic teachers who are open to and ready to adopt new ideas into their teaching. These teachers convince others by demonstrating the positive results of the adoption.

However, Rogers (1983) also argues that diffusion generally causes wider socioeconomic gaps among people because earlier adopters have favourable attitudes towards innovations and are likely to have more resource available to adopt high-cost innovation than later adopters. Moreover,

“most interpersonal network links connect individuals who are alike or similar in adopter category and socioeconomic status. So innovations generally ‘trickle across’ rather than ‘trickle down’ in the interpersonal communication structure of a social system”(Rogers 1983, p.392).

Thus, it is possible that as a result of educational change introducing new teaching methods, only enthusiastic teachers whose teaching was already better than the average adopt innovations. Consequently, it may widen the gap of education quality delivered by those talented teachers and the other teachers.

The early majority adopt new ideas after deliberation. They hold a unique position between the very early and the relatively late to adopt innovation. The late majority wait to adopt innovations cautiously until most others have done so and most of the uncertainty has been removed. Laggards are often near isolates in social networks with

limited resources. Thus they cannot afford to adopt an innovation without a high level of certainty that it will not fail (Rogers 1983 pp.246-250).

This section examined diffusion of innovations in general and some innovation characteristics that affect adoption rates. It also studied adoption categories and their characteristics. The following section will focus on educational change and its models of going to scale.

3.12 Elmore's models for scaling up educational change

“The fundamental problem I am interested in is why, when schools seem to be constantly changing, teaching practice changes so little and on so small a scale” (Elmore 1996 p.6).

Elmore (1996) examined state-led educational reforms in the United States and discussed whether teachers have actually change their ways of teaching. Although this thesis focuses on educational change in developing countries, his findings in the United States provide valuable lessons. According to Elmore, in the past, educational reformers naively believed that good curriculum models would be self-explanatory and so would influence the teaching practices in classrooms. However many reforms did not succeed at influencing more than a small fraction of schools and classrooms.

In order to rectify this situation, Elmore (1996) suggests five models of scaling up new teaching practices among teachers, required by educational change. He argues these might “serve as the basis for experimentation with processes designed to more exemplary practices to scale” (p. 21). These models are as follows;

- i. Incremental growth
- ii. Cumulative growth
- iii. Discontinuous growth
- iv. Unbalanced growth
- v. Cell division or reproduction (Elmore 1996)

In each model, I will discuss the applications and applicability in developing countries.

(i) Incremental growth

In this model, the proportion of teaching in a particular way would increase constantly according to the number of teachers trained each year, until the proportion approaches 100 percent. This is based on an assumption that the training would change teachers'

ways of teaching. However, teaching practice is unlikely to change as a result of exposure to training, unless that training also brings some kind of external normative structures and supports interaction around problems of practice (Elmore 1996).

(ii) Cumulative growth

This model implies that 'getting to scale' is a slower, less linear process than is suggested by the incremental model.

“It involves not only creating interventions that expose teachers to new practices, but also monitoring the effects of these interventions on teaching practice” (Elmore 1996, p.21)

This may require the creation of professional networks to support the practice of teachers who are in the process of changing their practice, or connecting the more advanced with the less advanced through some sort of mentoring scheme.

This model worked in China where UNICEF supported the in-service training programme for rural 'doctors'. The target group was rural 'doctors' who did not have a proper training and many of them were primary school graduates.

In the training, trainees learned theories and after they understood them, they practised them with trainers. In the next stage when the former trainees teach others, the former trainers supervise the lessons and give them practical suggestions. Training people requires a practical technique, and so practical exercise under supervision is important. All together, rural doctors serving 120 million people in Yunnan were trained (Sakai interviewed on 23/7/1997). Sakai emphasises that to change people's behaviour, understanding is not enough, but they need to practice with guidance.

(iii) Discontinuous growth

This is a sharply increasing, or discontinuous, growth model. This follows a process like a chain letter, in which an initial group of teachers learned a new practice, and each member of that group worked with another group and so on. The rate of growth might go from x, to 10x, to 100x, to 1000x. This shares the same problem of the incremental model in addition to creating a serious quality control problem, such as information distortion and misinterpretations.

(iv) Unbalanced growth

This involves concentrating a critical mass of relatively high performing teachers in a few schools where they will develop new ways of teaching. These schools are designed to serve as places where new practices are developed and passed to other colleagues. Over the time, these schools would be deliberately staffed with larger proportions of new teachers who have not been introduced to new models. Then these new teachers would be exposed to the norms of good practice.

This model also provides recognition to those who are genuinely interested in improving their teaching by putting them in influential positions over other colleagues. This is important for educational change as their colleagues often discourage those innovative teachers for doing extra and making the colleagues feel rather insecure. As is discussed in section 3.6.2, it is necessary to take into account these human factors such as enthusiasm, jealousy and insecurity.

The problem of this model is that teaching assignments are not made on the basis of a systematic interest in using schools as places to socialise teachers with new practices. To make this model work, it requires a deliberate strategy for placing teachers in settings where they would be most likely to develop new skills. Teachers need to be willing to work in a setting where they could learn to develop their practice as part of their professional responsibility. Especially in a country where the Ministry's managerial capacity is rather small, this may be a difficult model to implement at the national level.

Still this model is useful in a small scale for key decision makers. For example, some decision makers in the government can be seconded to another institution where most of the staff members master the new ways of educational planning. It would be useful especially in those countries where the power concentration of the key government officials' over the whole education system is enormous.

In order to scale up, creating small-scale successful cases is important not only in education but also in other disciplines. In relation to participatory approaches, Kar and Phillips (1998) also argues that

“for scaling-up to be effective, scaling-down may first be necessary by concentrating on a handful of cases of sustained community action in which participatory approaches play an important part, and using such cases as learning laboratories” (p.57).

(v) Cell division or reproduction

This model works from the analogy of reproductive biology. Rather than trying to change teaching practice by influencing the flow of teachers through schools, the cell division model involves systematically increasing the number and proportion of schools characterised by distinctive pedagogical practices (Elmore 1996).

This model starts with creating a number of settings in which exemplary practitioners are concentrated and allowed to develop new approaches to teaching practice. Then a number of these practitioners are asked to form another school, using the genetic material of their own knowledge and understanding to recruit a new cadre of teachers whom they educate with their own expectations on good teaching practice. Over time several such schools would surface with strong communities of teachers that have invested in particular approaches to teaching. Again this model shares the problem of staffing plans in schools especially in developing countries.

3.13 The conditions for attitudinal and behavioural change of teachers

Teachers are the centre of educational change as the change depends on what teachers do and think (Fullan, 1991). This section therefore examines how individual teachers change their ways of teaching in response to educational change.

Fullan (1991) suggests that teachers need to participate in skill training workshops, but they also need to have one-to-one and group opportunities to receive and give help and more simply to converse about the meaning of change. Under these conditions teachers learn how to use an innovation as well as to judge its desirability from more informed positions. Elmore (1996) listed the following points on change in teachers' practice.

- Teachers are more likely to learn from direct observation and trial and error in their own classrooms than they are from abstract descriptions of new teaching.
- Changing teaching practice even for committed teachers takes a long time, and several cycles of trial and error.
- Teachers have to feel that there is some compelling reason for them to practice differently, with the best direct evidence being that students learn better.
- Teachers need feedback from sources they trust about whether students are actually learning what they are taught (p.24).

These points facilitate the learning of any new, complicated practice. Yet reform efforts seldom incorporate these conditions. There is a need to have an explicit theory about “how human beings learn to do things differently” (Elmore 1996 p.24). Dalin (1993) also poses a similar question; “how would an individual teacher change values and norms?” (p. 113).

To respond to this question on behavioural change, a developmental psychologist, Vygotsky’s work is valuable. Vygotsky attempts to explain how people acquire new knowledge and skills through interaction with others. This can be a vital tool for implementing educational change. He created the concept of Zone of Proximal Development (ZPD) which is

“the mental distance between: actual developmental level as determined by independent problem solving and the higher level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers”(Vygotsky 1985).

In other words, ZPD refers to the range of knowledge and skills that students are not yet ready to learn on their own but could learn with help from more capable others. The things that they already know or they can learn easily on their own without help are below the zone, while the things that they cannot learn even with help are above the zone. Vygotsky suggests that the learning proceeds most efficiently when children are consistently exposed in teaching in the zone of proximal development (Good & Brophy 1995, pp.192-193). Vygotsky’s concept is also applicable to adults and teacher training (Scribner & Sachs 1991; Martin 1995, Harvey 1998).

Vygotsky’s work focused largely on the role of social interaction in the development of complex higher mental functions. Social constructivists are heavily influenced by Vygotsky’s ZPD. I use the definition of social constructivism as follows;

“In addition to emphasising that learning is a process of active construction of meaning, social constructivists emphasise that the process works best in social settings in which two or more individuals engage in sustained discourse about a topic” (Good & Brophy 1995, p.192)

Social constructivism can offer some instructions on how educational change could be carried out. According to social constructivists, people learn best in social settings (Good & Brophy 1995). This view is widely shared by other studies (Havelock & Huberman 1977, Hargreaves 1992, Elmore 1996, Harvey 1998). Havelock’s (1977)

model 'social interaction' discussed in section 3.3 is one of the examples. Therefore, creating such deliberate settings where teachers can learn from and work with others who have mastered new concepts and methodologies is important for effective training.

In general, the teachers who change anything in their classrooms in response to educational change are talented, enthusiastic and looking for better ways of teaching. They are anyway committed, talented and genuinely interested in quality education. As a result, they carry on using their time and energy to improve their teaching. However they are rather in a minority and the majority of teachers need to see the practical examples of classroom activities performed by these talented teachers.

Thus it is important to identify these talented teachers at the initial stage of educational change. Secondly once they master the new concepts and skills, they should work as mentors and trainers of their colleagues. It is also effective to create a critical mass of these enthusiastic teachers in one school and make them influence the rest of colleagues. Elmore's (4) unbalanced growth model is applicable to create the mechanism of this.

It is necessary to take into account that the talented teachers' commitments and personalities are not transferable to other teachers. Also for others, the talented teachers' applications of the new concept can be too complicated to adopt in their teaching. It is, therefore, important to learn from such talented teachers, however, the applications would need to be in simplified forms (Gibbs interviewed on 16/3/1998).

3.14 Two cases of scaled up educational projects and their enabling factors

There is a need to study the process of implementing an innovation and the process of ensuring the sustainability and replicability of the innovation (Little 1994, p.11). In general it is easier to find negative outcomes than positive ones and why things do not work than why things work. However what we need to know is how we can achieve better outcomes through innovations for a larger proportion of the population with less wastage of resources.

In fact, some successful cases have been reported in various countries. This section studies two such projects which have been successfully scaling up, the Active Learning through Professional Support (ALPS) in Indonesia (Moegiadi; Tangyong & Gardner, 1994) and the Jinlin project in China (Ordonez & Montana 1998).

3.14.1 The Active Learning through Professional Support (ALPS) in Indonesia

The Active Learning through Professional Support (ALPS) project in Indonesia has expanded gradually since it started in 1980 to ten provinces and it is now national policy to spread the project approaches to all twenty-seven provinces of the country (Little et al 1994, p.14). It was initiated by the Ministry of Education and Culture and the vast majority of the funding came from Indonesia with some support from the British Council and ODA. The main aims of ALPS is to improve the quality of primary education by changing the traditional didactic approach to a child-centred and active learning one through in-service teacher training. This requires teachers to change the perception of their roles and that is “a sharp and deliberate break from previous practice” (Moegiadi et al 1994, p.57). By making the classroom a more attractive and exciting environment for children to be in, there are a number of positive outcomes observed. Some of them are as follows;

- Approximately 20 000 teachers have been trained and participated in the project.
- In the classrooms, the interaction which used to be dominated by the teachers was replaced by pupil to pupil interaction.
- The teacher’s role changed and relationships in the classroom among the children and between the children and teachers became warmer and less dependent on the teacher.
- Pupils found the new classroom’s environment more interesting and welcoming and they started coming to school earlier and leaving later.
- Retention rates in the participating schools have increased rapidly and the project schools attracted more pupils from other schools.
- The learning place which used to be confined in the school classroom became diversified including visits to the local shops and factories in the community and local residents were encouraged to come to the school to talk about their work and experiences. This developed a new relationship between the school and the community.

(Moegiadi et al, in Little et al 1994, pp.61-63)

Another significant dimension of the project was that local provinces decided whether to join the project or not and that province ownership was accepted. As a result, although there were considerable variations in the operation, this local decision-making system and ownership made the project expandable and sustainable. In addition, ALPS has been

supported by a wide range of organisations and people including teachers' unions, PTA, schools, regional officials and most of all, children, parents and communities.

3.14.2 The Jinlin project in China

The Jinlin project launched in 1987 with 12 schools in 6 counties then expanded to 146 schools in 46 of Jinlin's 59 counties in 1996. It aims at making primary schooling in rural areas more relevant so that it would enhance the productivity and development of the community. New curricula and supplemental materials are developed and teachers are trained with assistance from UNESCO. Students are now learning health, hygiene, agriculture and other relevant local life skills. As a consequence, both students' academic performance and school retention rates have improved considerably. By the year 2000 Jinlin officials expect 2,000 schools to participate in the project (Ordonez & Montana 1996).

Ordonez (1997) identifies five factors contributing to sustained expansion from the Jinlin project;

- i. A valid premise;
- ii. Internal rhythms of scaling up;
- iii. A comprehensive approach;
- iv. The climate for other schools to join the project
- v. The continuity of a highly motivated leadership at all levels

(i) A valid premise

Reform efforts must be founded on a fundamentally valid premise. In Jinlin's case, the objective was to make primary schooling in the countryside more relevant so that it would have a direct impact on the productivity and well being of the community. Because of this valid premise, local communities, parents, teachers and even central government have supported and sustained the project. In ALPS project, the premise was to make primary education more child-centred and relevant so that pupils come to learn more and parents and communities commit to support it.

(ii) Internal rhythms of scaling up

We need to understand the internal rhythms of going from a small pilot project to a large scale national wide or provincial wide policy driven programme.

“There is a tendency to rest on the laurels and accomplishments of a small project and make it succeed to a point where replicating becomes too expensive or complicated. There is the reverse tendency to want to expand too rapidly in the flush of initial success, as the Jinlin officials were originally tempted” (Ordonez and Montana 1998, p.28)

The too hurried expansion will overload administrative structures and burden teachers and learners with simultaneous changes (Hoppers 1994). Through their experience, the Jinlin officials learned a long time frame of expansion was more realistic.

(iii) A comprehensive approach

A balanced and integrated approach to education reform is valuable since various aspects of reform such as curriculum/material development, in-service training and school management are all inter-related. The Jinlin project planned for a comprehensive school reform including work productivity, maintenance and improvement of school ground, teacher training and local curriculum development.

(iv) The climate for other schools to join the project

It is important to create and maintain the successful models which accommodate the climate which other schools outside the project can look upon and eventually join the project. In Jinlin's case, this helped the project expansion process since the applicant schools could prepare even before they joined.

(v) The continuity of a highly motivated leadership at all levels

In the Jinlin project, at the administrative level, the current Chairman of the Jinlin Provincial Education Committee and Vice-Chairman specifically in charge of the project are the same two individuals who started the project in 1987. Their role is not only to maintain the original leadership and drive but also to develop the project through the accumulated experience and lessons. At the field level, the schools and communities involved with the original phase of the project continue the implementation and take the additional responsibility of serving as models for many others. At the government level, both local and central governments' officials have been providing policy supports to the

project and assuring communities that education is the first priority for the future development. Such an organic co-operation among different groups of people and the continuity of their consistent supports are crucial for the sustained success and expansion.

3.15 Enabling factors of going to scale

From reviewing the literature and the two case studies, several enabling factors were identified. They are;

- the internal rhythms of scaling up;
- a long term commitment of the project implementers, the central government and also external donor agencies;
- education quality improvement such as active learning and life skills;
- sufficient resource mobilisation for a long term; and
- ownership of a project in local regional and community levels.

The benefits of the innovation for students and parents as the clients should be clearly demonstrated in the innovation. If the project contributes to better schools where students enjoy and learn more, then parents are convinced to send their children to school and to support the system. However what are regarded as benefits by parents is not clear and they may want their children in school as long as there is a place in a secondary school or in a training centre or a job (Little et al 1994). The resource mobilisation takes various forms such as approach within external donor agencies, decentralisation of local autonomy and financial responsibilities and community involvement.

3.16 Conclusion

Educational change includes both innovation and reform. There are some criteria of success of educational change, however, they are difficult to measure especially the projects are aiming at attitudinal and behavioural change of teachers. Although there are a number of barriers in educational projects in the developing world, this chapter discussed five of them. They are (1) nature of innovation; (2) human aspects; (3) project planning process; (4) financial resources and (5) monitoring and evaluation. Project success largely depends on local project implementers and teachers, who are centre of

educational change. These human factors are critical but often neglected by project designers and donors.

‘Going to scale’ involves various aspects so that it is defined in several ways. The working definition of ‘going to scale’ or ‘scaling up’ in this thesis is that it involves three aspects of change; (1) system change, (2) quantitative changes and (3) qualitative change. According to these aspects, some indicators of going to scale are drawn. Among these, qualitative change is the most difficult but crucial as “real change involves changes in conceptions and role behaviour, which is why it is so difficult to achieve” (Fullan 1991, p.38). Other studies agree that change in attitudes and behaviour of teachers is the key in educational change. Choice of the indicators, choice of methodology and analysis of the data are often problematic especially with the qualitative aspect of going to scale.

Edwards and Hulme (1992) and Chambers (1992) suggest four strategies of going to scale, namely; (1) additive; (2) multiplicative; (3) diffusive, (4) self-spreading and self improving strategies. Although these strategies have been identified mainly from experiences in NGOs’ projects and spreading new approaches such as participatory rural appraisal, these strategies are useful for scaling up educational change. The additive and diffusive strategies are useful to increase the quantity, whereas multiplicative strategies can enhance the system change. Chambers’ self-improving strategy is valuable for qualitative change such as behavioural and attitudinal change.

To understand how people accept new innovative ideas and why some ideas are adopted faster than others, the diffusion theory is useful. Innovations that are perceived by receivers as having greater relative advantage, compatibility, trialability, observability, and less complexity will be adopted more rapidly than other innovations. People adopt innovation at different times. Early adopters can serve as a role model for others and decrease uncertainty about a new idea by adopting it (Rogers 1983).

While Edwards, Hulme and Chambers examine over all strategies of scaling up projects and new concepts, Elmore focuses on a core problem of scaling up educational change. Elmore (1996) poses a fundamental question on educational change that is why and when schools seem to be constantly changing, teaching practice changes so little and on such small a scale. Although his focus is in the United States, his question and findings are crucial in developing countries as well. Elmore suggests five models of scaling up new teaching practices among teachers, required by educational change. They are; (1)

incremental growth; (2) cumulative growth (3) discontinuous growth; (4) unbalanced growth and (5) cell division or reproduction.

Vygotsky's concept of zone of proximal development (ZPD) and social constructivism are significant to understand how teachers learn new ways of teaching. The social constructivists argue that people learn best in social settings and this view is widely shared by other studies (Havelock & Huberman 1977, Hargreaves 1992, Elmore 1996, Harvey 1998). Elmore's unbalanced growth model can utilise Vygotsky's theory for introducing educational change.

Chapter 4 The Child-to-Child approach: Evolving concept and its applications

4.1 Introduction

From the time the concept of Child-to-Child (CtC) was initiated in 1978, it has spread more than 70 countries in throughout the world. There are reported successes, as well as shortcomings in implementations. This chapter reviews the overall development of CtC and associated issues of going to scale. Initially looking at the history of how CtC was initiated and has evolved over the years, it subsequently examines some fundamental concepts, which have influenced the CtC approach, such as lifelong education and active learning. It also examines various degrees of children's participation. After focusing on the different emphases placed on CtC by three UN agencies, namely UNICEF, UNESCO and WHO, it explores the diversity of applications the approach has found within the field at a school level. Observations of difficulties experienced in practically applying the concept together with the conflict between diversity and quality assurance are discussed. The final section studies the issues of going to scale in relation to the CtC approach and those projects using the approach.

4.2 The initiation of Child-to-Child and its evolving concept

4.2.1 Initiation

The General Assembly of the United Nations officially designated 1979 the International Year of the Child (IYC) and challenged all member states to review their programmes for children. The concept of CtC was initially developed in 1978 by an international group of education and health professionals from eight developing countries and from the Institute of Education and the Institute of Child Health, University of London (Somerset 1987, p.v). Especially David Morley of the Institute of Child Health, who was long convinced of the power of education as a vehicle of primary health care and Hugh Hawes at the Institute of Education played a key role in developing and disseminating the concept of CtC. The CtC programme was conceived and established to mark the IYC.

The IYC was the first landmark that "child-consciousness could make a feature of the international agenda" (Black 1996, p.13). The year both revealed and enhanced the growing importance of children in the public mind (Black 1996, p.14).

The original idea of CtC was that “it teaches and encourages children of school age to concern themselves with the health and development of their younger brothers and other younger children in the community” (Aarons & Hawes 1979, p.2).

It started as the CHILD-to-child programme, symbolising an elder child taking care of a younger sibling. It was based on the fact that more than 50% of childcare is provided by older children as mother substitutes in developing countries (Morley & Lovel 1986, p.236).

Although the programme was officially launched in 1978 with limited funds, the support of Mrs. Callaghan, wife of the Prime Minister of the day, permitted 10 Downing Street, the official residence of the British Prime Minister, to be used as the location of the launch (Hawes 1988). This indicates that, from its beginning, initiators of CtC have attempted to harness both political will and power to promote and disseminate its concepts and methods (Pridmore 1996).

During the International Year of the Child, considerable publicity was given to the programme resulting in an international committee being created. Various forms of materials were distributed throughout the world and by 1981 when an evaluation was commissioned, 48 countries had initiated CtC activities (Feuerstein 1981).

4.2.2 Evolving concept

During those first eight years of operation, the interpretations and implementations of CtC evolved in three major dimensions:

(i) The concept widened from ‘sibling care’ to ‘child power’

Hawes described that “Child-to-Child extends the WHO concept of Primary Health Care and the UNICEF emphasis on Child Survival and Development by helping to enlist ‘Children Power’ to spread both. Children can be a great force in spreading good health ideas and practices”(cited in Somerset 1988, p. ix). Hawes gave four ways to do so;

i. Child-to-Child

Through the care they provide for younger siblings and other younger children in the community.

ii. Children-to-Children

Through their influence upon other children in their age group and community – especially those with less education and fewer opportunities than they have had.

iii. Children-to-Community

Through their influence as a group upon their own communities.

iv. Child-to-Family.

Through their individual influence upon their families.

(Somerset 1988, p. ix).

(ii) From Programme and Project to Approach

From the surveys in 1981 and 1987, it became apparent that there were different styles of applications of CtC in the field. In many cases, a component or ideas from CtC had been adopted, rather than the establishment of specific CtC programmes or projects. In contrast, it was found that such distinct programmes tended “to build fences round them and hence create rivalry and raise animosity. Hence the phrase ‘Child-to-Child programme’ or ‘project’ was and is consciously discouraged. Child-to-Child prefers to see itself as an approach or a movement” (Hawes 1988, p.25). It was hoped to encourage the use of the CtC approach that permeated through various programmes and projects.

(iii) Recognition as a mean to quality education

CtC can offer ‘another path to learning’ (Hawes 1988) which is not only confined to health education but also enhancing quality education. It is clearly stated in Tay’s “Child-to-Child in Africa: Towards an Open Learning Strategy” (1989):

“Although originally conceived as a means of helping to achieve a better standard of health among children and in the community, the Child-to-Child approach is now recognised as a mean of improving the quality of education in general” (Tay 1989, p.143).

Hawes (1988) also argues in his “Child-to-Child Another path to learning” that

“The study also explores the way in which such approaches to health education may help to “unlock” better approaches to learning on a much wider scale. If children can form groups to discuss health priorities based on their own knowledge and experience, why cannot they do so in relation to other subjects? If an older child can help a younger one to practice better health habits, why cannot she help it to practice reading?” (Hawes 1988, p.4).

For example, as many developing countries are “coping with larger enrolments with shrinking budgets, the whole issue of exploring alternative methodologies needs to be examined. The use of children to help each other in classrooms is foremost among such methodologies” (Hawes 1988 p.xi).

This recognition of CtC as a mean to improve quality education has been supported and advocated by UNESCO.

Currently CtC is widely understood as an innovative approach to health education in both primary and non-formal schools. It regards children as partners in health promotion in their school, homes and community. The approach is based on the following three basic assumptions;

- That primary education becomes more effective if it is linked closely to things that matter both to children and to their families and communities
- That education in school and education out of school should be linked as closely as possible so that learning becomes a part of life
- That children have the will, the skill and the motivation to help educate each other and can be trusted to do so.

(Hawes 1988, p.3)

4.2.3 The Child-to-Child co-ordination in London and in Paris

The co-ordinating unit was established in 1978 jointly between the Institutes of Child Health and of Education, University of London, with restricted fund. This restricted fund limited the number of the core staff and the meetings of the appointed International Committee regularly. By the end of 1979, it became clear that the unit would concentrate upon guiding and monitoring the growth and development of CtC in three main areas;

- To generate and publish ideas and materials related to the role children can play in helping others to improve their health and well-being.
- To assist in the discussion and clarification of ways in which such ideas and material can be effectively disseminated and their effect monitored.
- To facilitate the exchange of information between sectors, agencies, and countries concerning the ideas, their dissemination and their effect

(Somerset 1988 p.vi).

These activities were planned and monitored by a London based steering committee whose members included staff of the Institute of Child Health, the Institute of Education and the British Council. Although the initial fund ran out by 1982, they continued to meet regularly to discuss activities working on a voluntary basis. Their expertise and consistent commitment subsidised the personnel cost and contributed in developing the whole movement of CtC (Hawes interview on 1/9/1998). In 1988, the London co-ordinating unit became the Child-to-Child Trust, based at the Institute of Education in London, however, the three main areas in which it functions have remained to-date unchanged (CtC Trust, 1998).

These functions are supportive and facilitative rather than directive. Therefore, the Trust does not go and preach the concept or implement projects using the approach in the field, but it rather advises and supports people who are using it. This non-directive style of operation of the Trust as well as the copyright free materials produced by the Trust have led to diversity among regionally adapted activities and developed a sense of ownership among local implementers (Carnegie 1991).

One of the strengths of the Trust is that the staff members, trustees and advisors come from a variety of backgrounds in health, education and other development related sectors. Some of the key figures were David Morley and Hugh Hawes (the founders of the CtC concept); Duncan Guthrie and John Webb (the first and second directors of CtC); Beverley Young (an educationalist at the British Council), Audrey Aarons, David Warner, Stephen Varistandsel and Christine Scotchmer. In particular the concept initiators, Morley and Hawes, have remained active in facilitating the whole movement to this date. Their charismatic personalities and futuristic visions have attracted a number of supporters worldwide.

In addition, in 1984, a co-ordinating office 'L'Enfant pour l'enfant' was also opened in Paris for CtC activities throughout Francophone countries. It continues to operate and is situated at the Institute of Health and Development at the University of Paris. Resources are drawn from the Centre for Research in Education and Health in Liege, Belgium, the International Catholic Children's Bureau (ICCB) and a network of African partners (Pridmore 1996, pp.83-84). The L'Enfant pour l'enfant office follows the pattern of the English structure in that it is founded on the principle of intersectoral co-operation. It performs similar information dissemination and monitoring functions to the Trust in

London (Somerset 1988). However, the office in Paris is much smaller than that of London in terms of personnel, funds and activities (Hawes, interviewed on 1/9/98).

4.3 Various aspects of Child-to-Child

Carnegie (1991) highlights two major concepts that strongly influenced CtC; life long learning and active learning. In addition, CtC is an approach to promote children's participation. This section examines these three aspects of CtC.

4.3.1 Lifelong education

Lifelong education was originally defined in the 1972 UNESCO Report "Learning to Be". This report recognised that "for the first time in history, education is now engaged in preparing men for a type of society which does not yet exist" (Faure 1972, p.13). It emphasised the need to link education with the real life needs in order to prepare children to the fast changing world. "Education suffers basically from the gap between its content and the living experience of its pupils, between the systems of values that it preaches and the goals set up by society, between its ancient curricula and the modernity of life" (*ibid.* p.69).

Ravindra Dave, the former Director of UNESCO Institute of Education, points out the following two principles of lifelong education; that learning is not confined to the school classroom and also that the roles of teacher and learner are interchangeable. CtC is based on the belief that children can become teachers of their community, siblings, parents and neighbours and that they can learn and teach in various settings. Schools can welcome 'outsiders' who are not qualified primarily as 'teachers' and this is a major step towards the realisation of lifelong education (Hawes 1988, pp. ix,x). Once both children and adults understand that, no matter the age or background one has, everyone repeats teaching and learning continuously in a day, the role of schools and teachers are thus redefined. Schools are one of the learning places and teachers are not the exclusive source of learning.

In the context of providing a relevant education, Hawes (1988) emphasised the importance of teaching children what they need to learn to meet their 'needs now' *i.e.* at their own age and situation, rather than 'needs later', *i.e.* what they will need when they take examinations and leave school, which assumes that they would all make it that far.

“Currently we tend to use the term ‘drop-outs’ and ‘wastage’ interchangeably. With more concern for ‘needs now’, it may be possible to ensure that drop-outs are not wasted” (Hawes 1988, pp. 90, 91).

These ideas of lifelong education are at the centre of the last two decades discourse on improving quality of education and were freshly articulated in the deliberations of the World Conference on Education for All at Jomtien in 1990 (Carnegie 1991). Later, Faure’s ideas were refined and further developed by the International Commission on Education for the Twenty-first Century in UNESCO.

The Commission emphasises that “as we approach the 21st century, the missions of education in its multiple forms should encompass all the initiatives that enable persons throughout life to acquire a dynamic knowledge of the world, an understanding of other persons and of oneself through a subtle mix of the four basic forms of learning; learning to be, learning to know, learning to do, and learning to live together” (UNESCO 1998).

4.3.2 Active learning

Somerset (1988) examines the concept of ‘active learning’ in his evaluative survey on CtC. He argues that:

“if there is one issue on which all major educational thinkers are agreed, it is that the acquisition of new knowledge by young people should be an active process (p.148).

The central and indispensable component of active learning is the ‘inner’ activity in which the learner constructs and reconstructs his system of knowledge, skills and values. It is this structure which enables him to order new experience, and thus to attach meaning both to the outside world and to his role in it” (Somerset 1988, p.151).

Kutnick (1988) also emphasises that primary schools should adopt active learning methods based on the child’s interests and concerns. Active learning is opposite to what Freire (1972) calls the ‘banking system’ in which “the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits” (p.46).

Learning activities can be divided mainly into ‘receptive learning’ and ‘enquiry-based learning’. Receptive learning involves pupils being told things normally by teachers and enquiry-based learning involves them finding out things for themselves. “Learning is active to the degree to which the child is enabled to develop ideas which are meaningful”

and usable, therefore, reception and discovery are complementary approaches to pedagogy, but not alternatives (Somerset 1988, pp.152-153).

Children can go through active learning without any physical activity or learn very passively with a lot of physical activities. Herein lies a danger for teachers to misunderstand the meaning of 'active learning' as well as the CtC approach. Many teachers believe that if children are singing and dancing on health, irrespective of whether they understand the meaning, they are 'doing Child-to-Child'. "To teachers the distinction between 'teaching with activities' and 'active learning' is not always clear" (Carnegie 1991, p.21). Somerset (1988) also cautions that the link between pupil activities and the enhancement of understanding can never be taken for granted.

Active learning is a crucial concept of the CtC approach as it emphasises the linkage between learning and doing in and out of school and children making decisions. It assumes that when children learn to take decisions about health, it helps them to lead healthier lives and influence the health of others (Hawes 1997). CtC suggests 6 steps of actions that include both receptive and enquiry based learning processes;

- Choice and study of health topics at school
- Finding out at home/ in the community
- Discussion and plan of action at school
- Taking action at home
- Discussion on result at school
- Doing it better at home

(Hanbury 1995, diagram 1).

The underlying philosophy was simplified to 4 steps; (1) Recognise, (2) Study, (3) Act and (4) Evaluate (Hawes H. & Scotchmer C. 1993). The basic principle of these steps is that children learn, find out, act and feed back both in their school and home or community. Somerset (1988) concludes that through diverse activities, CtC has had much success in displacing passive pedagogy (p.149).

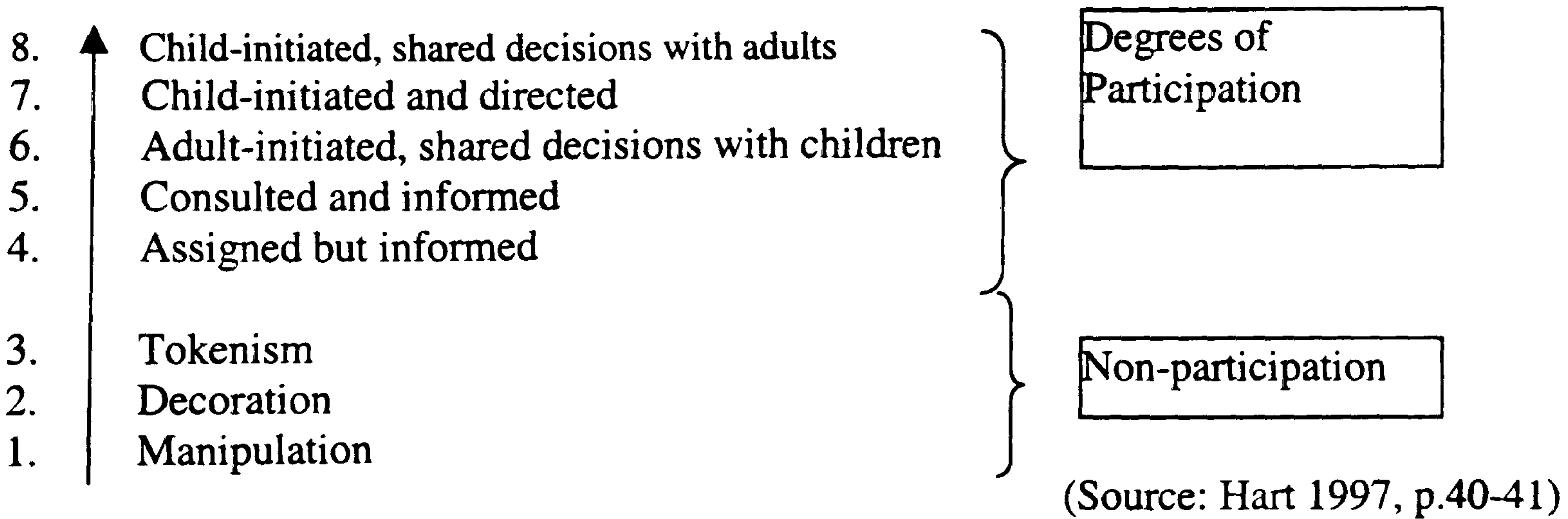
4.3.3 Children’s participation

Children’s participation in health promotion is at the core of the CtC approach. CtC encourages children “to play an active and responsible role in the health and development of themselves, other children and their families” (Hawes & Scotchmer 1993). As was discussed in section 4.2.2, the approach rests on an assumption that “children have the will, the skills and the motivation to help educate each other and can be trusted to do so” (Hawes 1988 p.3).

The need for children’s participation in development is clearly expressed in the World Declaration on the Survival, Protection and Development of Children, which was signed by world leaders at the World Summit for Children in 1990. The declaration includes 10 specific actions for child survival, protection and development which include; child health; food and nutrition; the role of the family; and basic education. It invites and encourages children’s participation in these actions through the statement; “among the partnerships we seek, we turn especially to children themselves. We appeal to them to participate in this effort” (UNICEF 1990 p.7). The CtC publication in association with UNICEF, “Children for Health” is a response to this appeal (Hawes & Scotchmer 1993).

Over the last two decades, the value of children’s participation has gained recognition among development workers and government officials. Through children’s participation, development programmes can correctly address children’s needs, instead of benefiting only those with louder voice and more prominent positions in society (Pridmore 1998). However, the degree of participation varies enormously and in many cases, children are just parroting someone else’s agenda. To examine this, Hart (1997) creates a ladder as a metaphor to illustrate the different degrees of children’s participation. Figure 4.1 simplifies the 8 rungs of the ladder;

Figure 4.1 The ladder of children’s participation



It illustrates “how adults can support the involvement of children to the maximum of their desire and capacity” as well as “what is not participation” (Hart 1997, p.40). He explains the each rung of the ladder with some examples of environmental projects.

(i) Manipulation

Manipulation refers to those in which adults consciously use children’s voices to carry their messages. For example, children march with placards against toxic wastewater, without any attempt made to have the children understand the issue according to their abilities. Harts argues that this is not a good way to introduce children to democratic political action. This kind of adult manipulations are often observed in CtC activities where teachers or health workers make slogans and poems and children repeat them without understanding them.

(ii) Decoration

“Decoration is seen when children wear costumes or T-shirts promoting a cause, but have little notion of what the cause is all about and no involvement in organising the occasion.” (*ibid.* p.41) Adults simply use children to bolster the cause, although they do not pretend that the cause is inspired by children.

(iii) Tokenism

With tokenism, adults design projects in which children seem to have a voice but in fact have little or no choice about the subject or the style of communicating it, or no time to formulate their own opinions. For example, children at conferences are often selected by adults with little opportunity to consult with their peers whom they are supposed to represent. Children can be involved in conferences at the highest rung of the ladder. To involve them as tokens will impress the press and audience, but children could be given an impression of democratic participation as a sham.

(iv) Assigned but informed (Social mobilisation)

Social mobilisation is most commonly used by international agencies working in the developing countries.

“In many large-scale projects, although the children may not have initiated the project, they may well be fully informed about it and feel real ownership of the issue, and may even have been involved in a critical reflection on the issue” (Hart 1997 p.42).

Hart (1997) describes one example from Sri Lanka, in which children passed fundamental health principles to the village through village dance performances. He argues that social mobilisation must be followed with more genuinely participatory experiences, otherwise, children learn the notion that they are used when needed, rather than the idea that the children’s perspectives are themselves important.

Social mobilisation is a common form of health promotion using the CtC approach, especially in Africa. In general, children enjoy performing in front of others and feel proud of themselves when adults pay attentions to their messages. The challenges are that normally children involved with health promotion are a fraction of the whole school and that the process of child selection may not be fully participatory.

(v) Consulted and informed

Projects can be designed and run by adults but children understand the process, are consulted and have their opinions treated seriously. For example, if children conduct surveys, they should be informed of the purposes and should be asked to volunteer for the survey, and each should be fully informed of its results (Hart 1997, p.43). The survey is one of the popular activities of Child-to-Child and often children enjoy finding out some facts from their homes and community. Often the survey is conducted as part of their homework, therefore, they are not being asked to volunteer.

(vi) Adult-initiated, shared decisions with children

Children should take part in the planning and design of projects for children such as those for play spaces. It is important for adults not to assume what children want. Children need to be involved to some degree in the entire process. For example, to make a playground, children may not have a voice in some technical discussions by engineers and architects, but they should be able to understand how and why compromises are made. In this way they would understand that their participation was not merely a token but was important.

(vii) Child-initiated and directed

It is difficult to find such projects except in the world of children's play. "It takes particularly observant adults to notice children's initiatives, allow them to happen and recognise but not control them" (Hart 1997, p.44). In Zambia, a growth-monitoring project was initiated by a schoolteacher and children carried out the monitoring. However, soon they took further initiatives to monitor more babies' growths around their community. This exemplifies some projects that increase the degree of children's participation.

(viii) Child-initiated, shared decisions with adults

Children may be able to carry out projects themselves, but they may need to work with adults at some stage for consultation. Adults who are good at listening to and observing children in order to know better how to respond can support children's initiatives without directing them.

However "the line between an adult offering assistance and children feeling that they have no choice but to accept it is often an ambiguous one. It takes some time to establish a climate of trust wherein children feel that to involve adults does not necessarily mean subjecting themselves to adult control " (Hart 1997, p.45).

Hart emphasises that an "important principle is to avoid working at the three lowest levels, the rungs of non-participation" (Hart 1997 p.41). Pridmore (1998) warns that the ladder metaphor could be confusing and lead people to start at the bottom and climb up to the top. In addition, it can be discouraging for people who may have to strive to reach even the bottom rung of the ladder (p. 5). Moreover, a single project may consist of elements which belong to different rungs. Also the projects which fall into the first three rungs can still accommodate a sense of participation and pride by the children. Hart's ladder is valuable to examine the kind of children's participation adults are aiming at and implementing.

Similar to Hart's ladder, Gibbs (1993) also created four stages of CtC school activities from his observation in Zambia. This will be discussed in Chapter 6.

4.4 Variety of interpretations by different international agencies

Promoting children's health through schools has been an important goal of UNICEF, UNESCO, WHO and other international agencies since the 1950's (WHO 1997, p.5). As the UN agencies have inter-related but different mandates, they interpret the CtC approach with various emphases. I have selected the three UN agencies most involved with promotion of the CtC approach, UNICEF, UNESCO and WHO, whose main foci are children, education and health respectively. I critically examine the different emphases placed on CtC by each organisation with respect to their own agendas. Although I am aware that other agencies such as the World Bank or UNDP are also involved with health and education, their involvement in promoting CtC is limited and indirect.

4.4.1 UNICEF

For UNICEF, CtC is regarded as part of their child survival and development strategy. UNICEF has been one of the greatest promoters of CtC since its inception, as its focus is children's wellbeing. UNICEF acknowledged the achievement of the CtC concept by presenting the CtC Trust the 1991 Maurice Pate Award.

Since 'Facts for Life', the most famous and widespread publication of its kind, was published in 1990, UNICEF has been promoting the idea of children as communicators of Facts for Life (UNICEF 1996). 'Facts for Life' brings the essential child health information that all families have a right to know (UNICEF 1993). UNICEF assisted the Child-to-Child Trust with the publishing of 'Children for Health: children as communicators of Facts for Life' (Hawes & Scotchmer 1993).

4.4.2 UNESCO

UNESCO, as an educational organisation, regards CtC as an innovative approach to better learning. It recognises the pedagogical philosophy behind the CtC approach, such as lifelong education and active learning. As is already discussed in section 4.2.2, it welcomes the recognition that "the CtC approach used in connection with public health teaching had developed into a pedagogical method in its own right" (Tay 1989, p. 1). UNESCO also saw CtC as peer-tutoring, although CtC is much wider than peer-tutoring. Moreover, peer-tutoring comes from a totally different tradition such as programmed learning and the pupil teachers (Hawes 1998). UNESCO's publications on CtC include

‘Mobilizing Education to Reinforce Primary Health Care’ (Morley *et al*, 1984); ‘Child-to-Child: Another path to learning’ (Hawes 1988) and ‘‘Child-to-Child’ in Africa: Towards an Open Learning Strategy’ (Tay 1989).

In 1990 the largest educational conference on basic education in the last century, the World Conference on Education for All (WCEFA) was held in Jomtien, Thailand. This conference set a goal of achieving ‘Education for All (EFA) by the year 2000’ and produced ‘The World Declaration on Education for All’ (WDEFA) published by UNESCO.

The declaration emphasises that education needs to provide “basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning” (UNESCO 1990, p.3).

CtC is effective in realising such education.

4.4.3 WHO

WHO views CtC as a strategy to Primary Health Care in order to achieve ‘Health for All’, that was endorsed in the Alma Ata Conference in 1978. In this conference, health education was seen as the key to achieve Health for All. Also as is discussed in Chapter 2, WHO has been supporting the initiatives of comprehensive school health education and promotion and health promoting schools.

These concepts of ‘health promoting school’ defined by WHO and ‘life skills’ developed by UNICEF have evolved parallel to ideas from CtC. The latest CtC publication, ‘Health Promotion in Our Schools’ unites them and at the same time, links them with the minimum health content promoted in the book ‘Facts for Life’ (Hawes 1997).

4.5 Child-to-Child approach in the field

4.5.1 Outreach and enquiry based projects

Various CtC activities have been observed in formal and non-formal sectors in over 60 countries. In his evaluative survey covering 114 projects in 39 different countries, Somerset (1988) classified the projects according to three main types;

- Outreach projects (41%), in which the major purpose is to involve children in activities, which promote beneficial change.
- Enquiry based (18%) in which the major purpose of children's activities is to use activities to enhance the quality of learning. In other words, children are not expected to do much health promotion with others.
- Non-Child-to-Child (40%) a group made up of a variety of health education projects in which CtC materials were employed.

(p.15)

In outreach projects, the target groups are not confined to younger children, rather the following four groups are recognised:

i. Child-to-community

Children as a group may present songs, plays, poems *etc.* during parents' meetings or other public occasions with the purpose of influencing the health practices of the community. Or children, working individually or in groups, may, for example, carry out neighbourhood surveys on immunisation or demonstrations on how to make Oral Rehydration Salts (ORS).

ii. Child-to-family

Children may carry home health knowledge and skill they have acquired in the programme, either by putting these competencies into practice, or perhaps by direct communication.

iii. Child-to-environment

Children may be involved in activities aimed at improving the quality of the environment such as cleaning, tree planting and gardening.

iv. Child-to-child

Children, working individually or in groups, may be involved in providing care for younger children, or children with special needs, or a kind which improves their physical or emotional well-being, or stimulates their cognitive growth.

(Somerset 1988)

Somerset (1988) found teachers tend to initiate more enquiry based projects than outreach. Those innovative teachers' main concern is to enhance the competence of the pupils, rather than to train them as health messengers. For those teachers,

“Enquiry based approaches, with their emphasis on providing children with opportunities to generate some of their own knowledge through

observation, investigation and measurement will probably have much appeal” (Somerset 1988, p.44)

Thus such innovative teachers tend to regard the CtC approach as means to enhance better teaching and learning, rather than to promote health.

4.5.2 The difficulties of applying CtC in the field

Many innovative ideas, such as participatory approaches, democracy and children’s rights are introduced in the field with some serious problems such as distortion of the concepts and tokenism. The applications of the CtC approach are not exceptional. This study identifies five inter-related areas in which the difficulties in applications of CtC in schools seem to lie:

- i. The status of health education
- ii. The complication of the concept
- iii. Misinterpretation of ‘active learning’
- iv. The degree of utilisation of Child-to-Child
- v. Hard teaching environment and high turn-over rate of personnel

(i) The status of health education and the CtC approach

CtC is an approach to health education. However, as is discussed in Section 2.6.4, in many countries, health education is not seen as priority in the formal system. In fact, it is in non-formal schools for marginalised populations, such as refugees, that health education is a priority. That is the reason why often CtC is utilised more fully in the non-formal systems rather than formal primary schools (Hawes, interview 1/9/1998).

Despite the high recognition of school health education as a vehicle to achieve Health for All (HFA) in literature, it has not convinced politicians and teachers in many countries to implement it as a priority.

(ii) The complication of the concept

CtC is a fairly complicated concept that encompasses various educational objectives such as life long education, active learning and health across curriculum. Some aspects such as children helping each other and contributing towards the spreading of health ideas to others, may have already existed. However, some ideas such as life long education and

active learning are often new to most teachers and therefore it takes time for them to internalise the concept as well as to utilise it.

For example, the idea that ‘the roles of teacher and learner are interchangeable’ can be threatening to those teachers, who are used to didactic ways of teaching. Using children or outsiders of schools, such as health workers or farmers, as teachers is not readily acceptable to professional teachers and educational officials. This kind of resistance is observed not only in countries in the South but also in the North. ‘Child power’ or ‘empowerment of children’ is not yet so easily accepted in many cultural contexts.

In general, children’s participation in development is seen as low priority for several reasons. First, planners think that people are qualified to participate in decision-making only when adulthood has been reached. Second, children are seen as inherently non-productive despite the fact that they participate in all economic development. Third, “by treating children as passive and dependent, adults reinforce their monopoly of power in the world over and above that required to nurture children towards adulthood” (Edwards 1996, p.47-48).

Moreover, although teachers may understand the importance of the CtC approach and children’s participation in theory, they find it difficult to use it in practice, as they are not familiar with the idea themselves. In many cases, teachers themselves are not given enough authority to make decisions over their working environments.

(iii) Misinterpretation of ‘active learning’ and a lack of child-centred methods

Section 4.3.2 discussed that the concept of active learning is often misunderstood as children’s physical activities rather than mental ones. Feuerstein (1981) also found from her evaluation of programmes using CtC in 1981 that many lack understanding of the child-centred methodology promoted by CtC which aims to challenge children to think and solve problems. As a result, the minds of those utilising CtC remain unchanged about the potential of children in the promotion of health (Pridmore 1996 p.72).

(iv) The diversity of applications of CtC

CtC is a multi-dimensional concept and therefore teachers utilise it according to the knowledge from training and their own interpretations.

Hawes (1988) refers the spread of CtC activities to “a movement based round an idea, an association of people who are committed to that idea, but who perceive it, who disseminate it and who use it as they think fit and proper. It is this looseness, this flexibility, which gives CtC both its strength and its vulnerability” (p.7).

Some teachers use CtC purely as a pedagogical approach in the classroom without connecting with any health contents. For example, a teacher makes children study mathematics in-groups and learn from each other in a class. In contrast, some teachers think they are ‘doing CtC’ as long as children are cleaning the school compound and bringing safe drinking water to their classrooms. In other cases, CtC is not even mentioned, but people use the CtC materials and ideas.

While this flexibility in interpreting the concept into action provides a sense of ownership, it also creates a danger that very simplified and reduced forms of CtC activities could become predominant in the field. Moreover, in formal education, uniformity and standardisation are required by quality assurance mechanisms such as national examinations or curriculum. The diversity of applications, therefore, might be difficult to absorb into such uniform systems. There is a critical tension between diversity of activities together with a sense of ownership and the uniformity required by the standardised education system together with quality assurance.

This tension between diversity of activities and the uniformity with quality assurance is common in introducing innovative concepts at scale. The question here is what are the minimum components without which it is not CtC. Chambers (1995) describes these as “uncompromisables” in relation to participatory approaches.

Pridmore (1996, p.91) suggests “four principles” which are “non-negotiable” to CtC as follows;

- Child-to-Child involves children in useful and enjoyable activities appropriate to their age and ability.
- Child-to-Child develops partnerships for health at all levels, especially between health and education.
- Child-to-Child counts all children in.
- Child-to-Child does not belong to anyone.

(Pridmore 1996, p.91)

However, creating such principles discourage diversity and ownership of users.

(v) Hard teaching environment and the high turn over rate

Teachers are generally overloaded by dealing with large class sizes, double or triple shifts in a day and over crowded curriculum and lack of teaching materials. Vandalism prevails in many countries such as Zambia, which severely damages physical conditions of classrooms. Managerial problems in schools and throughout the national educational system are as such that often educational resources are under-utilised. Consequently innovative teachers cannot fully demonstrate their talents and enthusiasm in the classrooms. Above all they are underpaid and so demoralisation among teachers and educational officials deteriorates quality education.

In addition, there are often only a few enthusiastic and innovative teachers who appreciate CtC as a means to improve their teaching. So even though the ideas of CtC are introduced into the whole school, only one or two teachers would use the concepts and once these teachers are transferred then that school is no longer a CtC school.

One of the main criticisms is that the CtC concept is not acceptable to many societies where children are not supposed to have voices, especially to adults (Pridmore 1996, p.226). However, I argue that the notion of gender equality, for example, was not acceptable even in European countries where women did not have a right to vote until late the 19th or early 20th centuries. The notions of human rights, anti-racism and democracy are relatively new concepts in the human history and were not respected in western societies until recently. It always takes time for people to accept and internalise a new concept in their daily lives and taking time does not invalidate it.

Despite all the difficulties and conflicting values with traditional practices, CtC has succeeded in proposing new ways for better health education and in transforming many people's value systems around the world. There is a need to develop methods to assure the quality of activities while accepting the diversity and flexibility in interpretations.

4.6 Distinction between scaling up a programme/project using the Child-to-Child approach and scaling up the concept of Child-to-Child

The requirement of scaling up the impact of innovations is recognised not only in education and health sectors (Shaeffer 1994; Little 1994; Uvin 1995; Elmore 1996; Hubley 1996) but also in over all developmental programmes (UNICEF 1989; Edwards

& Hulme 1992; Chambers 1995). The pressing needs for improving health status and education quality in the developing world require quantitative applications of innovations such as CtC.

With CtC, there are two types of going to scale. One is a project or a programme using the CtC concept and the other is the widening appreciation of the CtC concept (Williams, interview, 13/8/1998). This distinction is crucial, as although to-date many projects and programmes using CtC have not succeeded in going to scale, the concept itself has reached many countries and an enormous number of people throughout the world.

4.6.1 Going to scale: projects and programme using the Child-to-Child approach

When a CtC project using the CtC approach is introduced, I propose that there are three inter-related issues which need to be examined; (i) the concept, (ii) the process of introduction and implementation and (iii) the personnel.

(i) Child-to-Child concept

As is discussed in section 4.5.2, the CtC approach is complicated and multi-dimensional and therefore it needs to be appropriately interpreted and understood by personnel who are going to introduce the CtC project. Before implementing the project, which introduces the CtC approach, the implementers have to decide clear objectives and which aspects cannot be missed out. Without the clear objectives, it is difficult to plan how to train teachers for what change. Teachers need to be informed clearly what they should aim at.

In countries such as Uganda and Zambia, communicating information through performance, such as dancing and singing, is common, and therefore often observed as a part of CtC activities. However, children making decisions and enquiring about their family members' health would take much longer time to implement. Starting with culturally acceptable elements of CtC and then gradually increasing other dimensions can be a possible strategy. In many cases, however, these different elements of CtC are not recognised at the initial stage which prevents a systematically planned for step-by-step introduction of CtC.

(ii) Process of introduction and implementation

A carefully planned process of introduction and implementation of educational change is crucial. When introducing new concepts such as CtC, cascade models of training are often designed by project planners, however, this has not worked in many cases, or has succeeded only as long as funds was available. For example, in Zambia, the CtC coordinators were appointed throughout the educational hierarchy from national, provincial, district to school levels. Many “fireworks-type” training workshops were held for national and provincial coordinators so that they could provide more workshops for district coordinators who were supposed to train school coordinators. School coordinators were expected to train their colleagues after attending one or two workshops. In practice, however, the chain of the cascade-type training design was too long and too thin to reach ordinary teachers.

(iii) Personnel

People who actually introduce and manage changes are the key to success. Sometimes the concept is acceptable and the process is appropriate, but if the people dealing with it are not competent, a favourable result is not reached. Some innovations have been successful due to the involvement of charismatic figures (Lewin & Stuart 1991, p.283). In the case of Zambia, some enthusiastic teachers have succeeded in implementing good applications of the CtC approach.

4.6.2 Going to scale: the concept of Child-to-Child

The concept of CtC has spread rapidly throughout the world during the last 20 years. It has been highly recognised and supported in the international organisations such as UNICEF, UNESCO and WHO. The CtC approach has been, therefore, incorporated into their initiatives and programmes. This endorsement at the highest professional and political levels is “itself testimony to the eloquent advocacy of the powerful individuals who were lobbying for Child-to-Child at these levels” (Pridmore, 1996 p.79). In addition, the CtC materials are all copyright-free and translated into some 20 languages and this allowed local implementers to develop a sense of ownership and to adopt the approach into the local contexts.

Hawes (1988) points out that

“there are many occasions where CtC ideas and approaches presented through the various publications have been absorbed into national programmes and materials. These are the ‘invisible earnings’ of CtC and may well prove to be its greatest impact” (p. xxi).

Hawes also describes that a notion of ‘democracy’ or ‘peace’ does not go to scale, but it becomes a belief, like a religion. CtC is like one of these notions (interview on 14/7/1997). However, I would argue that a notion, such as the CtC and participatory approaches could spread into different cultural contexts.

Chambers (1995) argues that scaling up innovative approaches involve trade-offs and raises acute questions of quality assurance. In relation to participatory approaches, he supports scaling up because the benefits to poor people can be greater from doing less well on a wide scale than from doing better on a small-scale.

“The total gain to poor people may be much greater through initiating and supporting small changes in large organisations and programmes than through big gain in small organisations and programmes.

In going to scale, even when much goes wrong, there may be benign viruses in PRA¹ (behaviour and attitudes, handing over the stick, ‘they can do it’, ‘use your own best judgement at all times’, and so on) which can gain a foothold in large organisations, and then start to work away and spread” (Chambers 1995, p.59).

(PRA¹ : Participatory Rural Appraisal: “PRA is a growing family of approaches and methods to enable local people to share, enhance and analyse their knowledge of life and conditions, and to plan, act, monitor and evaluate” Chambers 1997, p. 102).

This argument has similarly been applied to CtC which Hawes describes as having “infectious enthusiasm” (29/4/1997). ‘Benign viruses’ introduced by the CtC approach may include: children are trusted as health promoters and participants in development; learning takes place both in schools and communities; and the roles of teacher and learner are interchangeable.

4.7 Conclusion

The concept of CtC has been evolved over the last 20 years since its inception. It is influenced by two main pedagogical concepts; life long education and active learning. Children’s participation is also at the core of the CtC approach. While these three concepts have gained their recognition among international organisations and offered

valid tools to achieve better quality education, they are relatively new, and for most teachers they are difficult to fully utilise in schools.

One of the strengths in disseminating CtC approach is that it has been recognised highly in the international community such as UNICEF, UNESCO and WHO and therefore associated with their initiatives. These organisations place different emphases on CtC as a means to achieve Health for All and Education for All.

At the school level, some difficulties in implementing CtC activities were related with the ambitious approach of CtC, which encompasses many concepts that challenge existing cultural beliefs. It encourages the diversity of applications according to the people who utilise it. While this flexibility provides a sense of ownership, it also creates a danger that very simplified and reduced forms of CtC activities could become predominant in the field. Moreover, in formal education, uniformity and standardisation are required by quality assurance mechanisms such as national examinations or curriculum. The diversity of applications, therefore, might be difficult to be absorbed into such uniform systems. This critical tension between diversity of activities with a sense of ownership and the uniformity with quality assurance is common in introducing innovative concepts at scale. As the approach is complicated and multi-dimensional, there is a need to identify some aspects that cannot be missed out.

CtC has led to many exciting and innovative activities in the field of school health education. The challenge is to identify the mechanism of scaling up and replicating these activities within formal education systems (Hubley 1996). This is a central question of this thesis and it will be discussed further in the context of Zambia in Chapter 5 to 10.

Chapter 5 Field research methods

5.1 Introduction

The first stage in answering the research questions involved a review of relevant information within published literature. This provided both theoretical models on scaling up educational change and also documented cases of how the CtC concept has been applied throughout the World. However, it was recognised that there was a lack of case studies on which theoretical models of scaling up had been converted into successful methodologies. Thus the second stage of this research has sought to use case studies to further answer the research questions.

This chapter presents the field research methods and the rationale behind the selection of these methods in accordance with the research questions. Subsequently it explains why Zambia is chosen as a case study for scaling up educational change using the Child-to-Child approach. It also describes the processes employed in choosing the three case studies within Zambia. The time-frame for conducting the fieldwork and the main questions considered therein for the central, regional and school levels are explained. Limitations of using these methods within this study are also made clear.

5.2 Research questions and case studies

As is identified in Chapter 1, this study is to examine how educational change using Child-to-Child approach can go to scale. My research questions are as follows;

How can educational change using the Child-to-Child approach go to scale?

- (a) How has the Child-to-Child programme in Zambia gone to scale?
- (b) What are the constraints and enabling factors of going to scale?
- (c) What are potential relevant models of going to scale?

Yin (1994) defines a case study as

“an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident”. Case studies can be used “to explain the causal links in real-life interventions that are too complex for the survey or experimental strategies” (p.15).

He also points out that a case study is appropriate for research asking ‘how’ and ‘why’. Since my study explores ‘how’ educational change using CtC approach goes to scale in the real-life context and ‘why’ some projects successfully scale up and others do not, I use case studies to provide answers to my research questions.

There are various types of case studies: single and multiple case studies; studies including qualitative data; studies based on any mix of quantitative and qualitative evidence; evaluation research studies (Yin, 1994). I use the ‘corrective case study’ in which “researchers may study a number of cases jointly in order to inquire into the phenomenon, population or collective condition. They are chosen because it is believed that understanding them will lead better understanding.” (Stake 1994)

5.3 Case studies in Zambia

5.3.1 Process of selecting Zambia as a case study

The primary criterion for choosing the field country was the existence of an educational programme using the CtC approach in a large scale, preferably at the national level. Although the CtC approach has spread throughout more than 60 countries in the world, most of them are rather small projects initiated by NGOs or research institutes (Hubley, 1996). Only the governments of Zambia and Uganda have taken the approach into their national systems.

In particular, in Zambia, the efforts to introduce the CtC approach started in the early 1980’s through two initiatives by the Ministry of Health (MOH) and a local Christian NGO. Subsequently, Zambia started a programme to introduce the CtC approach, which was called the CtC programme at a national scale in 1986 and has continued the programme to date. Despite the declining economy and enormous social problems, no other country has tried to institutionalise the programme or to integrate health across curriculum as Zambia has (Hawes, interview on 24/6/1997). Therefore, experiences in Zambia should provide important lessons to other countries that try to promote health education. Although Uganda has introduced the CtC approach in some regions, the spread and diversity of the programme is less than those to be found within Zambia.

Through several discussions with people associated with the CtC Trust in London and literature review, I learnt of the diversified CtC activities in Zambia. A number of international, governmental and non-governmental organisations have been involved

with the CtC programme through funding, curriculum development and training workshops. The CtC Directorate was established in the Ministry of Education (MOE). Since 1986, the CtC approach has been introduced to the formal education system via the CtC programme (UNICEF 1995).

In addition, there have been three main evaluations of the national CtC programme by the MOE and UNICEF and the latest one was carried out in July 1997. This shows the consistent interest and will of the MOE and UNICEF to continue the programme. I therefore, decided to choose Zambia as a case study for this research. The CtC programme in Zambia will be discussed further in Chapter 6.

Within Zambia, I chose three case studies in which the CtC programmes appear to be actively implemented and supported by different organisations and systems. The following section will describe the process of choosing these three case studies.

5.3.2 Process of selecting three case studies in Zambia

Through reviewing the literature and discussions with key personnel both in UK and in Zambia in November 1997, I identified three case studies in three different regions. The following Table 5.1 describes the three case studies, involved organisations and regions in Zambia.

Table 5.1 Three case studies in Zambia

Case study	Description	Organisations involved	Region
1	Key individuals in collaboration with a local NGO providing INSET	Institute of Christian Leadership (ICL)	Mpika, the Northern Province
2	A local teacher training college (TTC) assisting associate schools and a non-formal community school	David Livingstone TTC (DLTTC)	Livingstone, the Southern Province
3	A local NGO assisting CtC District co-ordinators and non-formal community schools	Copperbelt Health Education Project (CHEP)	The Copperbelt Province

(i) Case study 1: Key individuals in collaboration with a local NGO providing INSET

Several key individuals and the Institute of Christian Leadership (ICL), a local NGO in Mpika have been playing crucial roles in scaling up the CtC approach through providing

INSET workshops since 1981. The individuals were a few expatriates and local school teachers. These teachers were genuinely searching for better ways of conducting their lessons even before learning about CtC approaches. As a result, they became strong CtC believers and promoters. Currently Mpika is regarded as the most active region of implementing the CtC programme (MOE/UNICEF1997). Also one of the recommendations to MOE and UNICEF from the CtC programme evaluation in 1997 was to document and publicise the successful innovative classroom practice exemplified at Kabale School in Mpika. I therefore chose this region where key individuals in collaboration with a local NGO provided INSET workshops over a long term as one of my case studies. Although most of other regions in Zambia do not have a local NGO like the ICL, studying this case would be useful for identifying some enabling factors to help teachers understand and implement the CtC programme.

(ii) Case study 2: A teacher training college (TTC) supporting primary schools

After the CtC programme national launching seminar in 1986, the CtC approach was initially introduced in 1989 to six TTCs under the Teacher Training Education Project supported by UNICEF and the CtC Trust UK. This based on the assumption that the graduates would utilise the approach in their posted schools. Each of these TTCs were encouraged to associate with, and assist five local primary schools to start implementing the CtC programme. By 1992, each of all 13 TTCs had started the CtC programme with five associate primary schools (Chiwela 1996, p.5). However, only David Livingstone TTC in Southern Province has remained reasonably active in promoting the CtC programmes, whilst the other colleges have become less active over the period.

Introducing the CtC concept to TTCs as a foundation from which to spread the programme through their graduates and associate schools nearby was a tangible effort by the MOE to scale up the CtC programme. It is, therefore, valuable to examine how this college remained active and to identify enabling factors and constraints.

(iii) Case study 3: A local NGO supporting CtC District co-ordinators and non-formal education, Copperbelt Province

Since 1988, an NGO, Copperbelt Health Education Project (CHEP) based at Kitwe in the Copperbelt has been active in supporting health education. CHEP assists training seminars for district, zone and school CtC co-ordinators as well as for children in

spearheading groups. Although the government had appointed district and school CtC co-ordinators, they received insufficient resources to actually carry out any activity. Instead, CHEP is supporting these co-ordinators' activities through financial and technical support. CHEP also introduces the CtC programme to non-formal 'community schools' in impoverished areas and assists out-of-school youths to learn and promote healthy life styles to their peers. Thus this case study is about scaling up the CtC programme by involving target groups that are additional to primary school teachers and children. Since CHEP is supporting the CtC programme in a unique way in collaboration with the government, this case study would provide useful lessons for scaling up the CtC approach.

5.4 Research methods

Vulliamy (1990) describes one of the common features of qualitative research as

“rather than testing preconceived hypotheses, such research aims to generate hypothesis and theories from the data that emerge, in an attempt to avoid the imposition of a previous, and possibly inappropriate, frame of reference on the subjects of the research (Glaser and Struss 1967; Glaser 1978). There are two important implications of this. First, it implies a greater degree of flexibility concerning research design and data collection over the duration of a research project; and, secondly, it implies that the process analysis occurs simultaneously with the process of data collection” (p.11).

“[Qualitative research strategies are] particularly suited to the study of the processes of schooling and to the evaluation of innovations, where divergences between policy and practice can be highlighted through a sensitivity to the unintended, as well as intended, outcomes of innovation” (p.25).

It is intended that this study fall into the category of research described above and therefore mainly employs qualitative analysis such as in-depth interviews and case histories. However the difference between qualitative and quantitative research is not absolute and these two methodologies are rather complementary.

“One of the strengths of the case study approach is that it allows the researcher to use a variety of sources, a variety of types of data and a variety of research methods as part of the investigation”(Denscombe 1998, p.31).

I will therefore employ four different methods in this research. Such a mixture of methods can facilitate the validation of the data and findings through triangulation

(Denscombe 1998, p.40). The methods employed in the field research in relation to each question are shown in the following Table 5.2.

Table 5.12 Research methods

Research Questions	(1) Literature Collections/ Review	(2) Interviews/ Individual case histories	(3) Group interviews	(4) Observation of lessons and children's performances
(i)How has the CtC programme gone to scale in Zambia?	✓	✓	✓	✓
(ii)What are the constraints and enabling factors of going to scale?	✓	✓	✓	✓
(iii) What are potential relevant models of going to scale?	✓	✓	✓	

To answer each research question, one to four methods are employed. For example, through literature review, the term ‘going to scale’ was defined in Chapter 3. The second and third questions will be answered through using combinations of these four different methods.

(i) Methods used to understand how the CtC programme has gone to scale in Zambia

Literature review on the CtC programme is critical throughout the research. The documents available at the CtC Trust in London, which included evaluations of the programme, provided a significant base information before the field research. In Zambia, documents produced by the MOE, UNICEF and some key individuals provide critical information.

Interviews with key individuals are particularly useful to learn how the CtC programme has scaled up in all three dimensions; changes in system, quantity and quality. The questions asked in interviews with key individuals are described in section 5.4.2. Group interviews with head teachers and teachers, especially who are CtC committee members, and observation provided information related to quantitative and qualitative change,

while interviews with key individuals were valuable to learn about system and qualitative change.

(ii) Methods used to identify constraints and enabling factors of going to scale

Review of literature identified some of the constraints and enabling factors of educational change in general, and programmes related to health education and the CtC approach in particular. During interviews with key individuals, teachers and educational officers, constraints and enabling factors, which they faced to implement the CtC activities were asked. Their answers provided indispensable information.

(iii) Methods used to identify potential relevant models of going to scale

Literature review identified some theoretical and existing models of scaling up (Chapter 3). Studying case studies through literature review, interviews and group interviews in Zambia provided some insights of the process through which the CtC programme has scaled up. Also some inhibiting factors in the process were identified. Learning this process and inhibiting factors enabled this study to propose potential relevant models of scaling up educational change using the CtC approach.

5.4.2 Literature collection and review

Literature on issues of going to scale was mainly collected in the UK. This was done through subject search and inquiring with people who are involved in CtC associated activities. They recommended relevant articles and books. Literature on the CtC programme in Zambia was obtained mainly from the CtC Trust in London, UNICEF, the CtC Directorate, the MOE, the MOH and the Curriculum Development Centre (CDC) and University of Zambia (UNZA) in Lusaka, Zambia.

5.4.3 Semi-structured interviews for key individuals' case histories

In this research, semi-structured interviews with key people are used in order to describe individual case histories. Individuals' case histories examine key people's involvement with the CtC programme over the period. The main purpose of these case histories is to understand the roles of these key individuals in scaling up the CtC programme in the country.

“With the semi-structured interview the interviewer is prepared to be flexible in terms of the order in which the topics are considered, and perhaps more significantly, to let the interviewee develop ideas and speak more widely on the issues raised by the researcher” (Denscombe 1998, p.113).

It is therefore appropriate to use semi-structured interviews to understand each individual’s involvement with the programme over the period.

In each case study, three to four key individuals were identified. Some of their names appear in literature on the CtC programme including the CtC evaluations (1993, 1996 and 1997). People who know about the CtC programme in Zambia, such as Gibbs and Chiwela, who evaluated the programme, Hawes and Scotchmer in the CtC Trust and Miyato in UNICEF Zambia also suggested some individuals to me. In addition, the key individuals themselves introduced others to me. The list of these key individuals and their respective status is summarised in the following table 5.3.

Table 5.13The list of key individuals in three case studies

Case study	Key individuals	Status
1	Fr. Frank Carey	The founder of the ICL
	Mr. Patrick Kangwa	CtC district co-ordinator, Mpika
	Mr. Paul Mumba	CtC school co-ordinator, Kabale School
	Mr. Clement Mumbo	Former CtC district co-ordinator, Chinsali, seconded to Zambian Open Community Schools, ZOCS
2	Ms. Ida Kasaro	Provincial CtC Co-ordinator in Southern Province and former home economics lecturer in the DLTTTC
	Mr. Christopher Syamwenya	CtC District co-ordinator, Industrial art lecturer in the DLTTTC
	Ms. Martha M’zumara	Girls Education co-ordinator, Home economics lecturer in the DLTTTC
3	Sr. Lynn Walker	Director of CHEP
	Sr. Eileen McLaughlin	Former CtC provincial co-ordinator, Copperbelt, Chairperson of ZOCS
	Mr. Samson Sabi	CtC district co-ordinator, Chingola district
	Mr. M. Lubinda	CtC district co-ordinator, Mufulira district

Main questions asked to these key individuals were as follows;

- (a) What is your background? / Why did you become a committed teacher?
- (b) How did you come to know about the CtC approach and why did you become convinced that it would work?

- (c) What is your involvement with the CtC programme in Zambia?
- (d) What are the enabling factors and constraints to implement the CtC programme?

All interviews were conducted in English. All the interviews with key individuals were tape-recorded and transcribed. The duration of the each interview was about one hour, however, occasionally it lasted nearly two hours. After the transcriptions, some main points related to each question were manually highlighted and summarised. Some main contributions each person made to scaling up the CtC programme locally and nationally were also identified from the transcriptions. Most key individuals were interviewed two or three times to clarify some further questions related to their earlier interviews. Interviews with key individuals provided significant data on who they were and how they contributed to scaling up the programme.

In addition to case histories, I interviewed a number of people mainly in central government and donors in Zambia both in formal and informal settings. The interviewees are listed in Appendix A. The questions explored in central, regional and school levels are as follows;

1. At the central level

- i.* What is the historical background of the CtC programme in Zambia?
- ii.* What is the role of the CtC programme in the country? (What does CtC mean to key persons?)
- iii.* Who are the key persons?
- iv.* Where have these key persons moved and what has been their positions over the period?
- v.* What sorts of documents are available on the CtC programme in Zambia?
- vi.* What is the present supporting structure of implementing the CtC programme? (e.g. the role of CtC directorate, steering committee, and coordinators in the regions).
- vii.* What are the existing projects/programmes using the CtC approach in Zambia?
- viii.* What are constraints and enabling factors to scale up the CtC programme?
- ix.* What are the future strategies for improvement at the central level?

2. At the regional level

- i. Which organisation (TTC, District Education Office, NGO) has been involved?
- ii. What are the models of scaling up?
- iii. Who are the key persons and how did they become so?
- iv. What are constraints in the region?
- v. What are the enabling factors to scale up the CtC programme in the region?
- vi. Which schools are active?

3. At the school level

- i. Why some schools are more active in using the CtC approach than others?
- ii. How did CtC activities start in the school?
- iii. Who are the key persons and/or members of a CtC committee and how did they become so?
- iv. What sort of support do teachers receive from the district and provincial education offices or the government?
- v. What does CtC mean to teachers?
- vi. What sorts of activities are implemented in the school?
- vii. What are constraints to use the CtC approach in the school?
- viii. What are the enabling factors to use the CtC approach in the school?

5.4.4 Group interviews with teachers

Group interviewing is questioning systematically a small group of people simultaneously in formal or informal settings. It is a qualitative data gathering technique that finds the interviewer/ moderator directing the interaction and inquiry (Fontana and Frey 1994 pp. 364-365). I choose group interviews with teachers in primary schools as it has several advantages, described by Fontana and Frey (1994),

“The group interview has the advantage of being inexpensive, data rich, flexible, stimulating to respondents, recall aiding, and cumulative and elaborative, over and above individual responses” (p.365).

In each case study, I visited several primary schools to meet CtC co-ordinators and to learn their understanding of the CtC approach and the existing CtC activities in their schools. It was useful to “to explore attitudes and perceptions, feelings and ideas about a

topic” (Denscombe 1998, p.115). The average size of the group was three, who are a head teacher and two CtC school co-ordinators.

Some of the disadvantages and risks of group discussions are as follows.

“The emerging group culture may interfere with individual expression, the group may be dominated by one person, the group format makes it difficult to research sensitive topics, ‘group think’ is a possible outcome, and the requirements for interviewer skills are greater because of group dynamics” (Fontana and Frey 1994, p.365).

I visited primary schools in three provinces with the district CtC co-ordinators, who knew schools’ locations and teachers. Schools and teachers’ names are listed in Appendix B. However, in a few districts such as Mbala District in the Northern Province, Livingstone District in the Southern Province and Mufulira District in Copperbelt Province, I was also accompanied by school inspectors.

The reason why I was accompanied by school inspectors was as follows. It was necessary to visit provincial and district educational offices to inform them that I was visiting schools for my research. In Zambia, school inspectors in general do not have easy access to vehicles and financial resource for fuel to visit schools, even though that is their work. Thus they took advantage of the opportunity to visit schools, while I provided cost for fuel. Also those inspectors who accompanied expressed their interest in the development of the CtC programme. Consequently, those inspectors joined the school visits and it was almost impossible to refuse their company. Also when we visited schools, we were taken to the head teacher’s office and the head teacher called the teachers who were CtC committee members.

As a result, during my group interviews with head teacher and teachers who were CtC school co-ordinators, the district co-ordinator and sometimes the school inspector were also present. It was likely that the presence of the district co-ordinator, the school inspector and the head teacher affected the way teachers answered my questions. Sometimes, head teachers also answered my questions or supplemented information.

Main questions put to the group were as follows;

- (a) What are the numbers of students and teachers in the school?
- (b) Is there a CtC committee and/or CtC spearheading group (SHG) in the school?
- (c) What is the number of children in the CtC SHG?

- (d) What is your understanding of the CtC approach?
- (e) What are the existing CtC activities inside and outside of the school?
- (f) What are the enabling factors and constraints to implement the CtC programme?

5.4.5 Observations of lessons and children's performances

Robinson (1993) points out that a major advantage of observation is its directness, which can often usefully complement information obtained by other research methods.

“Interview and questionnaire responses are notorious for discrepancies between what people say that they have done or will do, and what they actually did or will do” (Robinson 1993 p.191)

This research tries to learn how the CtC approach is applied in and outside of schools. Therefore, observation of school lessons and children's activities provides some concrete examples of CtC applications.

I observed lessons in a few schools in each case study because not all the teachers use the CtC approach as their teaching methods. In Kabale School in case study 1, I observed several teachers' lessons as the majority of teachers in Kabale declared to be part of the CtC programme (MOE/UNICEF 1997). The observation of lessons with individual interviews was particularly useful to understand how teachers learnt from key individuals to apply the CtC approach in their lessons. I was at the back of the classroom and observed the whole lesson, which normally lasted 30 minutes. It was not structured and I took a note on how the teacher integrated health topics into subjects and how she or he interacted with children, using the group work. The way teachers group children in a classroom is described in Chapter 7.

In case study 1, I also observed a one-day school based workshop involving all the staff members organised by two key individuals. In case study 2, I observed how children were twinned and worked together in two schools. I also asked these children how they help each other. Also a lesson in the community school conducted by the CtC SHG in the DLTTC was observed. In case study 3, I observed Matete School's SHG children's activities in a 'compound', impoverished area, in Kitwe, Copperbelt. Also peer educators' sketches in Chipulukusu Compound was observed. In addition, I observed SHG children's activities in several schools for 20 to 50 minutes in all case studies.

5.5 Field trip Schedules:

The following programme structure was prepared and followed;

- Preliminary trip: 2 weeks in November 1997
- Main field research: 5 months from January 1998
- Ensuring complete data collection: 2 weeks in November 1998

(i) Preliminary trip: 2 weeks in November 1997

Before starting the main part of data collection in Zambia, I decided to make a preliminary two-week trip. Since I had never worked in Zambia before, it was very useful to plan the main fieldtrip to be conducted in 1998. The primary purpose was to identify the resource people and documents concerning educational change using the CtC approaches in Zambia. Also, I identified the three case studies described in the former section.

(ii) Main field trip: 5 months from January 1998

During this period, I was fortunate to be granted status as a researcher attached to the UNESCO Office, Zambia. I was granted this status as a consequence of my previous involvement as a staff member of UNESCO in Paris and China. The office provided me with office space and access to their facilities. I was mainly based in the capital city, Lusaka, but made various trips to Northern, Copperbelt and Southern Provinces. While I was in Lusaka, I tried to attend any education and health related donor meetings. These meetings were useful to learn educational policy and programme/projects of various donors in Zambia. Some of the such meetings and conferences are as follows;

- Southern African Development Committee (SADC) Meeting (8-10 February 1998)
- UNAIDS meeting (2 February 1998)
- Informal donor meetings on basic education sector investment programme (BESIP) meeting (16 February, 23 April, 29 May, 4 June 1998)

(iii) Ensuring complete data collection: 2 weeks in November 1998

Having analysed the data obtained from the first two trips mentioned above, some further information was collected in order to complete the study. I visited Lusaka and all the three regions of the case studies.

5.6 Limitations of the study

5.6.1 My status in Zambia

As is mentioned in the former section, I was attached as an education researcher to UNESCO. This provided me with access to central and local government officials, schools, teachers and donors. However, there was a danger that such status may have made the government officials and teachers think I would bring financial assistance to them. Under such circumstances, they may be expected to say positive things about the CtC programme and approach or to emphasise the shortage of materials and training. One head teacher in the Copperbelt Province asked me “so what did you bring for us today?” I tried to explain that I was a researcher seeking to understand the situation but not to decide how funds were to be allocated. However, the differences of the ethnic origin and access to transport and funds were obvious. I was seen as a wealthy foreigner from one of the donors.

5.6.2 A communication language and cultural issues

Also all the interviews were conducted in English. The medium of instruction throughout the formal schooling in Zambia is English and therefore teachers and educational officials did not appear to be uncomfortable in using it. However, the fact that English is the second language for both the interviewees and myself might have brought certain communication and psychological barriers to free expression of opinions and feelings. Also in Zambian culture, people tend to avoid any confrontation and to give answers that the interviewer may like to hear. These attitudes might have some effects on the answers recorded herein.

5.6.3 Choice of three case studies in Zambia

The limitation of choosing the three case studies discussed in section 5.3.2 is that they are rather unique cases as in most of other regions, there are not sufficient NGOs or TTCs which can support local schools and co-ordinators. However, identifying some key enabling factors and constraints for scaling up would be useful for the government and donors to take effective strategies in the future.

5.6.4 Group interviews with teachers

As is described in section 5.4.4, group interviews with CtC committee members in schools were mostly in the head teacher's office with her/his presence. These interviews are also observed by district CtC co-ordinators and, in three districts, inspectors of schools. Their presence might affect the ways teachers answered my questions. For example, in one associate school in case study 2, the head teacher was out of school, and teachers expressed a problem of lack of support from the head and administrations for the CtC programme. However, it was not likely that such opinion would be expressed in front of the head teacher. Similarly, it was difficult for the teachers to address problems of training and support from the CtC district co-ordinator and/or the school inspector in their presence. In addition, as is discussed in section 5.4.4 about some disadvantages of group interviews, in a few schools, only one or two teachers talked and others were rather quiet. Also some teachers were likely to feel difficult to express personal points of view in the group setting.

5.7 Conclusion

This chapter described the field research design and methods. This study employs a case study approach as it tries to explain the causal links in real-life interventions. Zambia has been chosen as a case study for examining scaling up educational change using the CtC approach. This was because Zambia is the only country in the world that has introduced the CtC approach nationally in a comprehensive way.

Within Zambia, three case studies are identified through literature review and interviews in UK and in Zambia. They are;

- (a) Case study 1: Key individuals in collaboration with a local NGO providing INSET training, Mpika, Northern Province
- (b) Case study 2: A teacher training college supporting primary schools; David Livingstone Teacher Training Colleges, Southern Province
- (c) Case study 3: A local NGO supporting CtC district co-ordinators and non-formal education, Copperbelt Province.

Four different research methods are employed to validate the data, which are (1) literature collections/ review (2) interviews/ individual case histories (3) group interviews and (4) observation of lessons and children's performances. These methods are used in

three field trips to Zambia in 1997 and 1998. One of the main limitation of this study is that my status as a UNESCO attached researcher and obvious ethnic difference created some false expectations for funding among government officials and teachers. This may have made them emphasise the lack of resources. However, this status enabled me to have access to government officials, schools, donors and internal documents. Also the presence of head teacher, CtC district co-ordinator and the school inspector in the group interviews with teachers made it difficult for teachers to express any problem related to those personnel who held a higher status.

Chapter 6 Zambia's education and the Child-to-Child programme

6.1 Introduction

This chapter presents overall development of the CtC programme, which aimed to introduce the CtC approach to primary schools in Zambia and examines some of the key efforts to scale up the programme.

Initially this chapter reviews the background of socio-economic situations and education. Subsequently it reviews some recent national educational programmes supported by external donors in this country. The following section studies the development of the Child-to-Child programme in Zambia since 1986. It also identifies some efforts of going to scale taken mainly by the government.

6.2 Geographical and social backgrounds

6.2.1 Geography and people

Zambia became a country independent from Northern Rhodesia in 1964 with Kenneth Kaunda as President. It is a land locked country that occupies a total land area of 753,000 Km² surrounded by 8 countries in Southern Africa. The neighbouring countries are Zaire, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. The region has a tropical climate with dry and rainy seasons. In the past several years it has been suffering from serious droughts. Administratively, Zambia consists of 9 provinces that are Luapula, Northern, Eastern, Central, Lusaka, Copperbelt, North Western, Southern and Western provinces. It is subdivided into 71 districts. These districts are divided further into zones.

There are seven major indigenous languages spoken as mother tongues: Chibemba, Chinyanja, Kaonde, Lozi, Lunda, Luvale and Tonga. The official language is English. The medium of instruction is English throughout the school system from primary education. Adult literacy rates for people aged 15 and over in 1995 were 71% for females and 86% for males (UNICEF 1997). The major religion is Christianity.

The population is estimated at 9.4 million with a high annual growth rate of 3.3 % in 1980 to 1995 (UNICEF, 1997). Because of this high rate, about 48% of the Zambians

are younger than 16 years (GRZ 1996 p.7). Rapid urbanisation has continued at an annual growth rate of 6.7% of the urban population in 1969 - 1980, 4.2% in 1980-90 and 3.6% in 1990-1994. Consequently with 46% of the population living in urban areas, Zambia is one of the most urbanised countries in Africa (World Bank 1996, Mulenga 1997 p.3). Many of them are living in poor conditions in impoverished areas and slums, which are referred as 'compounds' in Zambia.

6.2.2 Economy

Zambia's economy, which depended heavily on copper for 90% of its exports in the early 1970's, has been deteriorating since 1975 when copper prices dropped dramatically and oil prices tripled. In addition, the war in neighbouring Rhodesia, present Zimbabwe, affected Zambia severely. By hosting freedom armies from Rhodesia, and South Africa within its borders, Zambia became a target from bombing and sabotage raids from the south. The 1980s was a tough decade for Zambia when all the economic and social indices declined. In 1991, Frederick Chiluba was elected as the new president succeeding Kaunda who had ruled the country for 17 years (Wright 1995). The Gross National Product (GNP) per capita was \$350 in 1994 and the average annual growth of GNP from 1985 to 1994 was -(minus)1.4% (World Bank 1996).

However, recently some positive trends are also observed. Wright (1995) argues as follows.

“Despite the difficulties, the opening up of the society since 1991 is enabling Zambians to take on more direct and greater responsibilities for their own development. Each day, in more and more communities, people are organising to rehabilitate schools, to dig wells and organise for their maintenance, to ensure that children are vaccinated, and to build roads and improve the environment” (Wright 1995 p.).

It will take some time for current privatisation programmes to transform the economy and for rehabilitation of the social services. The government is also trying to improve Zambians' health and social status through the national health reform and other projects.

6.2.3 Health status

It is estimated that 64 % of the Zambians live in poverty and access to safe water supplies in rural and peri-urban areas range between 25-60%. Malnutrition is another

serious problem; about 12% of babies are born with a low birth weight and 40% of children are nutritionally stunted (MOE GRZ/UNICEF 1998, p.1).

Moreover, AIDS is a rapidly growing social threat in Zambia. The infection rate is around 10-15% in rural areas, while it is 25-30% in urban areas (MOE GRZ/UNICEF 1998). WHO estimated 17% of adults, about 700,000 were HIV positive at the end of 1994. Some 50,000 children are estimated to be HIV positive and under-five mortality rates have risen from 150 to 202 per 1000 between 1980 and 1996. More strikingly, there is a very high level of HIV prevalence among the professional groups (AIDS Analysis 1997). Life expectancy at birth was 48 in 1995 (UNICEF 1997). Funerals take place almost daily in 'compounds', impoverished areas in Zambia. The government is also losing its officials frequently.

The impact of HIV/AIDS on schools is particularly severe. According to Kelly (1999) during the AIDS conference held in Lusaka in September 1999,

“696 teachers died of AIDS-related conditions in 1996, 600 in 1997 and in the last 8 months of 1998 1,330 AIDS-related deaths were recorded. That equates with about 4 to 5 teacher deaths per day or approximately 4% mortality. A shocking figure compared to the HIV-related deaths of 2.3% among all people aged 15 – 49” (13BT2).

In addition, the number of AIDS orphans has been increasing dramatically in both urban and rural areas. The total number of orphans in 1993 was 115,900 and 24% of these orphans had lost both parents, while 25% had lost their mothers and the other 51% had lost their fathers (ZARD 1996, p.32). It is estimated that the number of orphans will increase to 600,000 by 2001 (MOE GRZ/UNICEF 1998, p.6).

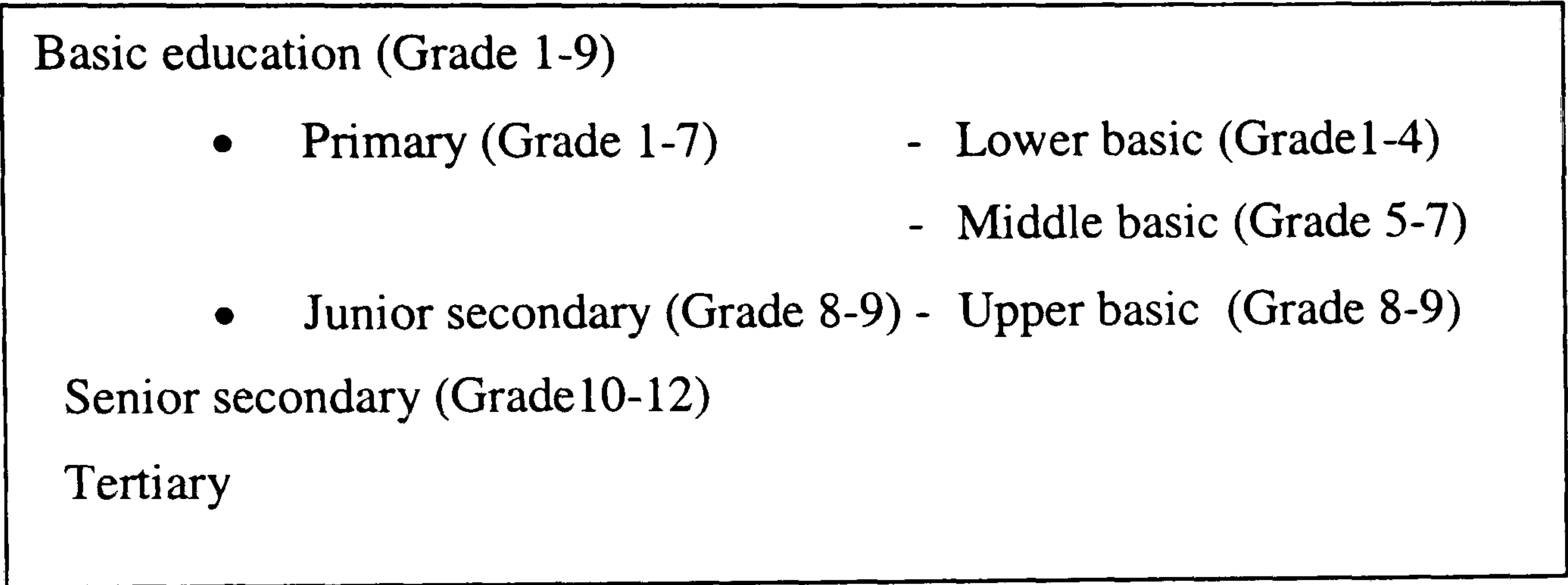
30% to 40% of these orphans drop out from schooling (Kelly 1998). They often become street children or start living with their relatives who have stable jobs. As a result, although teachers are not well paid, many of them often take care of their young relatives in addition to their own children. It appears that the whole of Zambian development is hampered by the magnitude of the HIV/AIDS epidemic. It is affecting every aspect of people's lives in Zambia.

6.3 Education in Zambia

6.3.1 The education system

Since 1984, the educational cycle has changed to a 7-2-3 system, which means 7 years of primary, 2 years of junior secondary and 3 years of senior secondary education before tertiary education. Primary education is divided into 2 parts of lower basic (grade 1-4) and middle basic (grade 5-7). Primary and junior secondary levels are regarded as basic education. The government had intended to introduce 9-year-compulsory education, however, this has not been realised. The system is summarised in figure 6.1.

Figure 6.1 The education system in Zambia



Primary schools are divided into two groups, middle basic schools provide Grade 1-7 and basic schools provide Grade 1-9. It is foreseen that eventually all the primary schools will become basic schools which provide the 9 years of basic education (Chelu & Mbulwe 1994).

In 1995, there were around 4,000 primary schools under the MOE with a total enrolment of around 1.8 million pupils, and 591 secondary schools with an enrolment of 253,000. Among the secondary schools, 411 are basic schools that have grade 1 to 9. Each year, primary enrolments increased by 1.6 % during 1985 – 1990. In past several years, non-formal community schools have increased especially in compounds. Basic education in Zambia will be discussed further in section 6.4.2.

There are 12 pre-service teacher training colleges (TTCs), 3 secondary teacher training colleges, 1 in-service primary teacher college, and a college for teachers for children with special needs. There are 2 universities, the University of Zambia (UNZA) and the Copperbelt University in Kitwe (GRZ 1996, pp.7-8).

Kelly (1994) analyses the critical state of education in the declining economy. He claims that education accounts for no more than 10% of total public expenditure and 2.5% of the GNP. This has caused a reduction in teachers' salaries.

“The result is a badly scarred and in many respects utterly devastated primary school system, with uninterested teachers, educationally deprived students and increasing public misgivings about the value of the education being offered” (Kelly 1994, p.1)

6.3.2 Educational administration

In the period from 1982 to 1991, there had been two ministries of education, namely, the Ministry of General Education, Youth and Sport (MGEYS) and the Ministry of Higher Education, Science and Technology (MHEST). MGEYS was responsible for primary and secondary schools, special education, continuing education and distance education. It maintained professional supervision of schools through provincial and district educational officers. MHEST was responsible for teachers, colleges, technical and vocational education and university (Chelu & Mbulwe 1994).

President Chiluba since 1991 restructured the new government. Today there are four main ministries providing education and training. They are as follows;

- Ministry of Education (MOE),
- Ministry of Science, Technology and Vocational Training (MSTVT),
- Ministry of Sport, Youth and Child Development (MSYCD) and T
- Ministry of Community Development and Social Services (MCDSS) (GRZ 1996).

The MOE consists of the Inspectorate, the Curriculum Development Centre (CDC) and the Examination Council. The MOE is responsible for primary, and secondary education, teacher training, continuing and distance education as well as curriculum evaluation and quality control. It also provides broad policies for universities. MSTVT is in charge of technical and business training. MCDSS offers non-formal education. MSYCD offers skill training to unemployed youth and protects the rights and well being of the child (MOE GRZ 1996, p.134). These four ministries need to co-ordinate their inputs on education and this is clearly stated in the educational policy, described in the following section.

6.3.3 Educational policies

Since independence, the government has produced three major policy documents on education. The first was *the Education Reform* of 1977, followed by *Focus on Learning* in 1992. The Ministry of Education published *Educating our Future – The National Policy on Education* in May 1996. *The Education Reform* emphasised education as an instrument of personal and national development and attainment of qualitative improvement as well as quantitative expansion. *Focus on Learning* highlighted the mobilisation of resources for the development of school education.

Educating Our Future stresses democratisation, decentralisation, curriculum relevance and diversification and stronger partnerships and cost sharing with other stakeholders. It recognises that

“provision at all levels can best be effected by strong and vital partnerships between the Ministry of Education and all other providers of education and training. Although much of the focus of this National Policy is on the activities of the Ministry of Education, other government ministries and the non-government sector have a vital role to play in Educating Our Future” (MOE GRZ 1996, p.vii).

The Ministry of Education also recognises some health problems amongst school children.

“It is the fact that a large proportion of learners in Zambia's basic schools are severely disadvantaged through under-nourishment, regular experience of hunger while in school, multiple parasitic infections, recurrent experiences of malaria, and diarrheal problems brought on by lack of safe drinking water. These multiple disabilities adversely affect the child's capacity to interact with and make the best use of whatever learning resources the school can offer” (MOE GRZ 1996, p.29).

In addition, with a variety of ministries and donors working on education, there is an urgent need for co-ordination. Therefore, the government and donors have designed the Basic Education Sector Investment Programme (BESIP). BESIP aims at co-ordinating financial and technical inputs from all donors' and the government, in order to utilise the limited resources more effectively.

At the same time, the government is also undertaking the Public Sector Reform Programme (PSRP) which aims at improving the efficiency of public service in Zambia. Specifically PSRP tries to reduce the size of the public service in order to allocate more resources to non-wage expenditures.

6.3.4 Basic education: primary and community schools

Universal primary education has been a national priority since its independence (Mulenga 1997, p.9). However, only 0.8% of GNP is spent on primary education (Kelly 1994, p. 23). In order to cope with a rapidly increasing child population with inadequate budget, class sizes became excessively large and many schools adopted double or triple shift teaching. This also shortened the length of the teaching day (Kelly 1994, p.13). In 1998, lower primary school students studied at school for 3 hours a day. Moreover, many children cannot afford the examination fee at the end of grade 7, so although they have finished 7 years of primary schooling, they cannot receive the primary certificate (Kangwa interviewed on 17/11/1997).

The national gross enrolment rate for primary schools fell from 96% in 1986 to 89% in 1995. Net enrolment ratios in primary education were 80% for girls and 86% for boys in 1995 (GRZ 1996). More than 660,000 primary school-aged children do not attend school and every year, 35,000 7-year-old children are denied admission because of the shortage of places (GRZ/UNICEF 1998). This shortage is more severe in urban than rural areas. In Lusaka, net enrolment ratio for primary schools was only 48% in 1995 (MOE GRZ 1996, p.27). While 79% of enrolled children completed primary education in 1995, the quality of education is low and only one third of them continued to secondary school due to the limited access (MOE GRZ/UNICEF 1998, p.1).

To provide basic education to those children who cannot go to primary schools, a number of 'community schools' are established in compounds in many regions. 'Community schools' provide non-formal basic education for four years. The special syllabus; Skills, Participation, Access, Relevant Knowledge (SPARK) was developed by a group of teacher trainers in collaboration with MOE and UNICEF specifically for community schools. A few CtC resource persons such as Kangwa and Mumbo from Kabale School and Miyato from UNICEF were involved in developing SPARK. Although SPARK is based on the formal primary curriculum, it includes more health and life related contents. The MOE recognises community schools and provides textbooks but not salaries.

The Zambian Community Schools Secretariat (ZCSS) was established in 1997 to assist local NGOs, community groups and churches to establish community schools. There are about 150 community schools which accept over 20,000 children in Zambia (ZCSS 1998). Community schools in 'compounds', therefore, are serving virtually the same role as ordinary primary schools.

6.4 The Child-to-Child approach and the Child-to-Child programme in Zambia

6.4.1 From two small initiatives to a national programme

The Child-to-Child approach was introduced to Zambia in the early 1980's through two separate initiatives in Mpika district, Northern Province and in Lusaka.

The first initiative was started in 1981 by two expatriates, Fr. Carey and Sr. Vincent since 1981. They started introducing the CtC approach through INSET to local teachers in the Northern Province. They also developed some teaching and learning materials based on CtC activity sheets. In 1985, they established the ICL to institutionalise the INSET introducing the CtC approach.

The other initiative was taken by Mr. Chitanda, a Provincial Health Officer with his colleagues in the MOH in Lusaka. Chitanda learnt about the CtC approach from David Morley while he studied in UK. On his return to Zambia, he in collaboration with the MOE selected 12 primary schools in Lusaka to implement Oral Rehydration Salts (ORS) programmes using CtC approach. 30 students in grade 5-7 from each school learnt to make ORS, subsequently, they taught their mothers in the communities how to make ORS. These activities were regarded as club activities.

Carey asked the MOH, MOE and the CtC Trust London to support the national seminar in 1986. During the national seminar, the President Kaunda called on every school in the country to adopt CtC and invited all the children to regard themselves as freedom fighters for health. Such approval from the highest authority in the country enabled the MOE to establish the Child-to-Child Directorate in 1986 as well as CtC committees in provincial, district and school levels. However, the responses were uneven across the country without clear guidelines or supports from the government (Hawes 1992, pp. 38-39, Chiwela 1996). It was only in 1994 when all the provincial and district education offices chose the CtC district coordinators. Some district, zone and school coordinators have been very active and effective in promoting CtC activities in school levels.

6.4.2 The CtC approach and the Child-to-Child Programme in Zambia

In Zambia, CtC is seen as both an approach and a government programme.

(i) Child-to-Child approach in Zambia

In Zambia, the CtC approach is regarded as approach not only to health education but also to quality education. The aspect of 'children helping other children' and peer education is highly valued in the Zambian context where there are not enough teachers and a large proportion of children do not have access to schooling. This is clearly described by Luswata, the educational officer for UNICEF Zambia as follows;

“Child-to-Child is used to spearhead the development and achievement of Education for All goals in Zambia. The Child-to-Child approach is used as;

Contents and methodology of health education through the national curriculum and school/college initiated activities.

An extended approach beyond health so that children are actively involved in learning and assisting each other both in and out of school in spreading important message” (Luswata cited in Hawes with Bonati 1992 p.22).

Hawes also argues that although CtC started as an approach to health education, increasingly many people have recognised its wider implication for basic education. One of these implications is peer tutoring, where a child or children are encouraged to help others either the same age or younger than themselves learn skills such as reading or numeracy (Hawes with Bonati 1992 p.19). As is discussed in Chapter 3, innovative teachers are more likely to regard the CtC approach as means to improve teaching and learning than to improve health (Somerset 1987). In Zambia, some talented teachers also developed the CtC applications in the classroom level, which are used not only for health education, but also general academic subjects.

The CtC approach is regarded as a component of various projects as follows;

- i.* The Teacher Education Project (1988) supported by UNICEF and the CtC Trust, London
- ii.* The Primary Science, Mathematics and Home Economics Teacher Training component (PSMHTT) of the General Human Resources Development Project (GHRDP): A co-operative project of Zambia and Canadian International Development Agency (CIDA) (1989)

- iii. Water, Sanitation and Health Education (WASHE) (1986-to-date), supported by Norwegian aid organisation (NORAD) and UNICEF
- iv. Child-to-Child programmes in refugee camps supported by Save the Children (USA)
- v. The Programme for the Advancement of Girls' Education (PAGE) (1994-to-date)
- vi. Basic Education Sector Investment Programme (BESIP) (1998-to-date)

Under (1) the teacher education project, the CtC approach was introduced to TTCs. Then CIDA funded 13 home economics teachers from TTC to receive CtC training in UK under (2) the General Human Resources Development Project (GHRDP). Separately, WASHE introduced the CtC approach into primary schools and communities in Western Province, and Save the Children introduced the approach in refugee camps in Zambia (Hawes, Bonati *et al.* 1992 p.39).

More recently, the MOE started the Girl Child Education Programme in 1994, which evolved into PAGE, in collaboration with CIDA, UNICEF and NORAD. PAGE utilises the existing CtC committees and spearheading groups in TTCs and schools to promote gender education. In addition, currently BESIP is planned to co-ordinate all the financial and technical inputs from donors and the government. One of BESIP's seven priority areas is "school health and nutrition". Both Chibale, the present director of the CtC Directorate, and Miyato, the former director of the CtC Directorate and present UNICEF educational programme officer, are members of the task force.

In addition, Action to Improve English, Mathematics and Science (AIEMS) was launched in 1994 and is planned to run until the year 2001, funded by the Department for International Development (DFID). AIEMS is aiming at improving the quality of teaching and learning of English, mathematics and science through a newly structured in-service teacher training. It has already established 14 provincial resource centres and 64 district resource centres attached to the existing schools. AIEMS coordinators are appointed throughout the hierarchy in central, provincial, district and school levels. AIEMS has also developed 7 training modules;

- Module 1: Management of INSET,
- Module 2: Non subject material for trainers
- Module 3: Specific subject material for trainers
- Module 4: Establishment and development of teachers' groups

Module 5: The twelve skills – “our class in action”

Module 6: Specific subject material in English, Mathematics and Science

Module 7: The girl friendly school is a child friendly school (MOE 1998)

The latest CtC evaluation recommends that CtC programme in Zambia can benefit enormously from the AIEMS structure by developing another module on Health Education using CtC approach (MOE/UNICEF1997).

(ii) The Child-to-Child Programme in Zambia

Since 1986, the CtC initiatives scaled up as an official government programme under the MOE (Hawes, Bonati *et al.* 1992 p.38, Chiwela 1996). The CtC programme is an educational programme which aims at introducing and spreading the CtC approach to TTCs and primary schools. The MOE has taken a number of efforts to implement and scale up the programme. These efforts of scaling up will be discussed in section 6-4.

This section reviewed the CtC programme and the CtC approach in Zambia. These processes reinforce each other's spread. The following section will examine the evaluations of the CtC programme in Zambia. This helps to understand the programme scaling up.

6.4.3 Evaluations of the Child-to-Child Programme in Zambia

So far, there are three major evaluations of the CtC programme organised by Ministry of Education and UNICEF. They are as follows:

- (a) Child-to-Child in Zambia, Evaluation Report (Gibbs 1993)
- (b) Child-to-Child Programme Development and Mapping: An assessment report of the developmental level of Child-to-Child programme in Zambia (Chiwela 1996)
- (c) Evaluation of the Child-to-Child Programme in Zambia (MOE/UNICEF 1997)

In the first evaluation in 1993, Gibbs proposed that;

“The quality of the CtC programme in then schools has been variable. It may be helpful to think of schools being at a variety of stages of development from Stage 1 to Stage 4” (Gibbs 1993, p.6).

Figure 6.2 describes these stages and their criteria. These staged were evolved from his observation of different schools. He also found that CtC activities in Kabale started with

songs and dramas and then moved onto twinning and then to CtC classroom activities. He hoped that these stages would serve as a guideline for schools to move forward in the future (Gibbs, correspondence on 19/8/99). Similar to Hart's ladder discussed in Chapter 4, Gibbs' stages provide a useful tool to consider what kind of CtC activities we are aiming at implementing.

In this evaluation, Gibbs found that the number of schools implementing Child-to-Child was small. It tries to indicate some percentages of schools, which reached in different stages.

“It is very hard to make an accurate assessment of the number of schools at each stage. Perhaps 5-10% of schools have reached at least Stage 1. Of this number, perhaps about 10% have reached stage 2. In these schools between 2 and 5% of the children are involved in the CtC clubs. This represents a very small number of children in the total school population. Only a tiny minority of schools are at stage 4”(p.9).

“Child to Child reaches a very small percentage of children in Zambia (0.01%)” (p.14).

However, this evaluation does not indicate the way these percentages were calculated. The danger of such figures is that they are quoted easily to describe the CtC programme in Zambia.

These stages are modified in 1996. The new stages and criteria are shown in figure 6.3, Stages in Child-to-Child (Chiwela 1996).

Figure 6.2 Four stages of Child-to-Child school activities

Stage 1

- CtC Committee
- Health talks at parades
- Children can chant the CtC slogan

Stage 2

- A CtC club meeting one a week usually with about 20 children
- Children learn songs and poems, some of which are related to health
- The CtC committee has drawn up a CtC programme mainly concerning with cleanliness
- CtC has the support of the headteacher

Stage 3

- The school CtC co-ordinator has formed a “spear heading group” which performs songs, dances, plays and poems some of which have been created by the children, and often first language is used
- The CtC committee has involved the children in drawing up an action plan with involves some health activities other than cleanliness in the school

Stage 4

- The school has an action plan which relates to its own specific needs and environment
- The “spear heading group” is a focus for activities in the school and community but the school action plan also involves activities in which the whole school is involved
- The CtC groups in a zone co-operate and share activities
- The children are involved in a wide range of activities that focus on health including dance and drama but extending to surveys, and community action
- Some teachers begin to use the CtC methodology in their teaching

(Source: Gibbs 1993, p.6)

Figure 6.3 Framework for programme development and school classification

Pre CtC stage

- Existence of Spearheading group,
- An open sensitive relationship established between spearheading group, group leader and school
- Contacts being established with local health facility
- General awareness of students and teachers of the CtC concept

Stage 1

- Existence of Co-ordinating committee
- Action plan based on identified needs
- Teachers adopting CtC methodology in integrating health education across the curriculum
- Children create and perform songs, dances, poems on health themes
- All students and teachers know CtC slogan

Stage 2

- Twinning among students
- Teachers adopting CtC methodology in integrating health education across the curriculum
- Children involved in decisions about health initiatives
- All students and teachers aware of CtC programme
- Health messages transmitted to home
- Safe play area

Stage 3

- Twinning among schools
- Children assume leadership in planning health initiatives
- All students and teachers know CtC philosophy/principles
- Individual provision of safe drinking water encouraged
- School involved in community health initiatives
- Children keep records of health activities

Stage 4

- Grouping of schools and colleges
- Children assume responsibility for planning health initiatives
- All students aware of rights and responsibilities
- Water available for washing at all times
- School spearheading specific community health initiatives

(Source: Chiwela 1996 Appendix A)

Chiwela sent questionnaires comprising 31 questions to 3,600 primary schools and received 1,108 responses were received. To validate the information from the questionnaires, visits to 156 schools and 8 TTCs in 31 districts in all 9 provinces were

made (Chiwela 1996 p.8). As a result, Chiwela found that about 95% of primary schools have a very limited CtC programme (Stage 1). About 1% to 2 % have an active programme (Stage 2) and about 1% to 2% have a school based programme that is effective and flourishing (Stage 3/4) (Chiwela 1996 p.17).

However, some of the questions in the questionnaires include;

“4. Are the teachers and pupils generally aware of the child to child concept?

7. Are the teachers adopting the child to child methodology in integrating health education across the curriculum?

21. Do all the teachers and pupils know the CtC philosophy/principles?” (Chiwela 1995)

The choices of answers are yes and no, and comments can be written. To such questions, teachers tend to answer “yes”, even when they do not fully understand the complexity of the CtC concept. This demonstrates the difficulties in constructing questionnaires.

The problem of this classification of schools in 1996 is that although it was described the school activities and was originally developed as a guideline for the future, later on, it was used to judge the CtC school activities. However, when the programme was introduced to schools, the teachers were not informed that they were supposed to progress from the pre-stage to stage 4 or to aim at stage 4. Therefore, these schools classified as stage 1 would remain stage 1 without progressing the stages. Also one of the criteria of the new Stage 1 is that “Teachers adopting CtC methodology in integrating health education across the curriculum” (Chiwela 1996). However, in the original classification (Gibbs 1993), “some teachers begin to use the CtC methodology in their teaching” is a criterion for Stage 4. Teachers’ behavioural change is difficult to achieve in any educational change. Thus the criteria in new classification need to be reconsidered.

In addition, many schools have a mixture of activities from the various stages. For example one school has four activities from stage 4, but 6 activities from earlier stages were not observed (Chiwela 1996). Moreover, even satisfying the criteria such as “General awareness of students and teachers of the CtC concept” and “Teachers adopting CtC methodology in integrating health education across the curriculum” given in figure 6.3 from pre-Stage and Stage 1 are not easy tasks for teachers and students.

This demonstrates the difficulties of creating such a classification to assess qualitative aspects of CtC activities in the school level. The CtC programme in Zambia involves a number of activities and users have interpreted the CtC approach in different ways. In particular, performance related activities such as sketches, dancing, songs, poems are very popular in many schools. Since the performance is common in the Zambian culture, there was a readiness to combine it with health knowledge. It is questionable as to whether one can judge these as an immature Stage of CtC activities.

Moreover, despite the severely declining economy and the decreased educational budget over the decades, if 95% of schools in Zambia satisfy the pre-CtC Stage and Stage 1, it can be seen as a good achievement, not a very limited activity of CtC.

It is therefore, necessary to enable teachers to understand CtC as an approach and the clear goals they should look for. One of the recommendations to the MOE and UNICEF from this evaluation in 1997 was to document and publicise the successful innovative classroom practice exemplified at Kabale School in Mpika. In addition, various schools in other districts have successful CtC activities throughout the country. Chiwela (1996, p.13) also identifies a small core of very enthusiastic, committed and knowledgeable zone and district coordinators. Their schools and to some extent, districts are exemplary both in CtC in classroom practice and outdoor activities.

This section examined the evaluations on the CtC programme in Zambia. The CtC programme scaled up in terms of system change and quantity, however, it has not yet enhanced potential qualitative change in teaching and learning in the majority of primary schools. At least, CtC committees and SHGs currently exist in most schools and CtC activities are often regarded as extra curriculum performance based activities.

6.5 Some efforts for scaling up the Child-to-Child programme in Zambia

Through interviews with key personnel and literature review, a number of efforts for scaling up the CtC programme are identified in Zambia. These efforts have been taken by the government, NGOs and some individuals. Chapter 3, section 3-6 discussed three dimensions of scaling up, namely, (A) quantitative change, (B) system change and (C) qualitative change. It is therefore useful to categorise these efforts under these three. Some efforts can enhance more than one dimension of change, and some are interrelated, therefore this categorisation is not definitive.

The following Tables 6.1, 6.2 and 6.3 summarise efforts taken for scaling up and the Child-to-Child Programme in Zambia under these three dimensions of change. In each dimension of change, efforts, implemented years and actual implementations are described.

6.5.1 Efforts for system change

System change involves change mainly at the central level, such as a new curriculum is introduced in the central and/or provincial level. The following Table 6.1 summarises these efforts taken mainly by the government in Zambia.

Table 6.1 Efforts for system change

Efforts	Year	Implementation
(1) The CtC programme was approved by the government	1986	CtC national launching seminar in Lusaka
(2) New posts were created	1986-to-date	The CtC Directorate created at the MOE, the CtC steering committee organised, CtC provincial, district and school co-ordinators appointed
(3) New Curriculum was developed Health education integrated into five different subjects	1993	Health education is addressed as integral part of the relevant existing subjects in the curriculum (CDC 1996)
(4) New materials were developed/ distributed		
◦ Child-to-Child in Zambia	1987	ICL developed and distributed through its INSET workshops, limited distributions in the Northern and Copperbelt Provinces.
◦ Child-to-Child in Zambia Orientation Manual	1993	The MOE developed and distributed to TTCs, schools
◦ WASHE Green Folder		Distributed by UNICEF/MOE About 60% of schools have received, 30 % have not seen it (Chiwela 1996 p.14).
◦ Children for Health	1995	40,000 copies were donated by UNICEF and distributed by MOE (MOE 1995). About 60% of schools have received, 30 % have not seen it (Chiwela 1996 p.14).
◦ Children writing for Children series	1996	Funded by UNICEF A national writing competition organised by the MOE
(5) Intention to develop new examination containing more health topics	1998	It is foreseen by the examination council (1998)
(6) More funds were allocated	1986-to-date	Funds are generally from UNICEF, CIDA not from the MOE

(i) Approval from the central government

The President Kaunda's approval at the CtC launching seminar in 1986 enabled the education system to implement the CtC programme nationally. This is one of the indicators discussed in Chapter 3, as a grass-root initiative gained the government approval.

(ii) New posts created

The government established the CtC Directorate inside the MOE in Lusaka in 1987. It also created the CtC Steering Committee and the committee members were from both the MOE and MOH. The CtC co-ordinators in provincial, district and school levels were also appointed.

However, all the newly created posts are additional to the original tasks. For example, the director of the CtC directorate is also the inspector of home economics in the MOE. The provincial and district co-ordinators were mostly inspectors of schools. The appointment process was not systematic and some regions did not have the co-ordinators until 1994.

(iii) New curriculum was developed

The CtC curriculum development workshop in 1991 identified seven major health themes to be integrated into five subjects in addition to home economics, which are English, Social Science, Mathematics, Zambian Languages, and Environmental Science. Subsequently the MOE with the Curriculum Development Centre (CDC) carried out the school curriculum review between August and November 1993 in order to improve the quality of education. The areas of improvement were identified and recommended in the policy document "Focus on Learning" (MOE 1992), as reading, writing, numeracy and life skills. As a result, they produced new syllabus for Social Studies, Mathematics, Home Economics, Environmental Science, English and Zambian Languages by 1996 from Grade 1 to 7.

"The review exercise also considered several issues of national concern, which due to the large number of subjects in the curriculum could not be taught as separate subjects. These include Human Rights and Democracy, Gender issues, Population Education, Environmental Education, Health Education and HIV/AIDS Education. To avoid overloading an already overloaded curriculum, in terms of subjects, it

was decided to address the issues as integral parts of the relevant subjects already in the curriculum.” (CDC MOE 1995).

The contents of the new syllabus incorporate many health-related topics especially in two major subjects, environmental science and social studies. In environmental science, there are various topics such as; personal hygiene, good eating habits, drug abuse, oral re-hydration solution, water borne diseases, infectious diseases, balanced diet, disease prevention, HIV/AIDS and others. Moreover, one of the general aims of environmental science is to develop in the pupil “a willingness to work with others and to share knowledge” (CDC MOE 1996, p. vii). This shares the same goal with the CtC approach. In social studies, pupils learn themes such as living together, food, health, human rights, education for development, and environmental education in every grade (CDC MOE 1996).

(iv) New teaching and learning materials were developed and distributed

Along with the new syllabus, new teaching and learning materials, which include health topics were produced. For example, the new English course books for Grade 4 and 5 include many stories and exercises that deal with health issues. In Environmental Science, the new Grade 7 book contains topics such as malaria, hookworm, making water clean and safe and stopping the spread of disease (Gibbs 1993).

In addition, the CtC directorate at MOE conducted a nation-wide story writing competition for children in Grades 5 to 7 in 1995. Children wrote stories concerning health and the best 40 stories from each grade were selected and published under ‘Children Writing for Children Series’ by MOE and UNICEF in 1996. This is also an example of integrating health into various subjects such as English.

As for teaching materials, UNICEF donated 40,000 copies of ‘Children for Health’ (Hawes & Scotchmer 1993) to 3,600 primary schools for teachers in 1995. ‘Children for Health’ includes all the health messages contained in ‘Facts for Life’ (UNICEF/WHO/UNESCO/UNFPA 1993) and provides guidance to teachers on how to promote children as partners in spreading health messages. However, the usage of these books by teachers is not always satisfactory (Chiwela 1996). This will be discussed further in Chapter 8.

(v) Intention to develop new examination containing more health topics

Alongside with new curriculum, which integrated more health topics into various subjects, developing new examinations is foreseen by the Examination Council.

(vi) More funds are allocated

In general, funds have been provided by donors and NGOs, but not by the MOE. The government's inputs are mostly human resources. It has been therefore, difficult to have a long term plan with consistent inputs and training workshops were organised as long as some funds were available in that particular year or time.

6.5.2 Efforts for quantitative change

As is discussed in Chapter 3, quantitative change involves numbers of; regional units such as counties, districts and provinces; primary schools TTCs; trained teachers; new teaching and learning materials in the programme. The following Table 6.2 summarises the efforts for quantitative change taken mainly by the MOE and donors in Zambia.

Table 6.2: Efforts for quantitative change

Efforts	Year	Implementation/contents
(1) Introduction of the CtC approach to teacher training colleges (TTCs)	1989-1991	Teacher Education Project introduced CtC to 6 TTCs in 1989, then to 7 TTCs in 1991
(2) TTCs supporting local primary schools	1989-1993	Each TTC supported 5 associate schools
(3) Introduction of the CtC approach to primary schools through training workshops	1986-1994	The MOE introduced the approach to some primary schools since 1986 then to all schools in 1994

(i) Introduction of the CtC approach to TTCs

The MOE introduced the CtC approach to TTCs since late 1989. This method of implementation was based on the assumption that the graduates would utilise the approach in their posted schools. The CtC programme in TTCs will be discussed further in Chapter 8.

(ii) TTCs supporting local primary schools

Each teacher training college chose 5 associate schools nearby to support the CtC activities and provided teacher-training workshops. This will be discussed in Chapter 8.

(iii) Introduction of the CtC approach to all primary schools

The MOE in collaboration with UNICEF have provided various Child-to-Child workshops in national and regional levels since 1986. Some associate schools were introduced the approach by the TTCs since 1989.

In 1994, the MOE conducted CtC orientation workshops to all the provinces in order to introduce the CtC programme to all primary schools. These workshops involved 40 people per province and 20 people per district (MOE 1994).

Overall, the way the programme was introduced to most individual teachers and schools was through one-off workshops for provincial and district co-ordinators. As a result, although the CtC programme has scaled up to the majority of schools and TTCs in Zambia, the current activities are rather limited in many schools.

6.5.3 Efforts for qualitative change

Qualitative change involves behavioural and attitudinal change such as teachers have changed their way of teaching in classrooms or used the new textbooks, or children develop their self esteem and gain more confidence. Some of the efforts identified under this change are summarised in Table 6.3.

Table 6.3: Efforts for qualitative change

Efforts	Year	Implementation/contents
(1) School and college based training workshops for all the staff members	1998-to-date	PAGE workshops at each TTC in 1998
(2) Identify model schools/regions and learn from their experiences	1996/1997	Recommendation from the CtC Evaluation in 1996 and 1997 (Chiwela 1996, MOE/UNICEF 1997)

(i) School and college based training workshops for all the staff members

School and college based workshops are increasingly recognised as effective by a number of people. For example, in 1998, college based workshops on PAGE were held at all TTCs. By involving all the staff members, it creates a sense of ownership of the programme and avoids information distortion. Effectiveness of school based workshops will be discussed in Chapter 7.

(ii) Identify the schools in Stage 3/4 and learn from their experiences

As is discussed in section 6-3-3, most of schools were classified as Stage 1 in the CtC evaluation (Gibbs 1997). Gibbs argues that “ideas can be effectively spread, albeit slowly, from school to school, from teacher to teacher” (Gibbs 1997 5.0). It is therefore valuable to study some active schools categorised in Stage 2-4 carefully and examine why they have managed to develop an environment where children could have a wide range of CtC activities. Although this recommendation has not been officially implemented, at least, Kabale school in Mpika is frequently visited by local teachers, regional CtC co-ordinators and educational officers.

Different efforts are applied in a region simultaneously, yet some regions are more actively involved in the CtC programme than others. I will therefore examine how the CtC programme has scaled up in the regional level through case studies identified in Chapter 5.

6.6 Conclusion

This chapter reviewed the socio-economic situations and education in Zambia. Because of the declining economy and AIDS epidemic in the country, health status of the whole population is worsening in last two decades. Health education and the CtC approach are, therefore, relevant to the current situations.

It also examined the introduction of the CtC approach and the origin of the Child-to-Child programme in Zambia. The introduction of the approach to Zambia took place in the mid 1980's through two small initiatives by the MOH in Lusaka and ICL in Mpika respectively. Subsequently in 1986, the CtC programme was launched through the national seminar. There was a clear intention of scaling up the programme nationally. The CtC programme still exists to date in the country. The MOE, local NGOs and enthusiastic individual teachers took a number of efforts for scaling up the programme. Especially, the MOE's role has been critical to introduce and implement both the CtC approach and programme in the national scale. This chapter identified and categorised these efforts under three dimensions of scaling up; quantitative, system and qualitative change.

Various efforts for going to scale are also used in these three case studies. The following Chapters 7, 8 and 9 will examine each of case studies and identify efforts, some enabling factors and constraints for going to scale.

Chapter 7 Case study 1: 'Key individuals in collaboration with an NGO providing INSET'; Northern Province

7.1 Introduction

Chapter 6 identified three existing cases in three provinces in Zambia where the CtC programmes have been actively implemented. Chapter 7, 8 and 9 will explore each of these case studies to and identify some enabling factors and challenges of scaling up the CtC programme respectively.

This chapter examines the first case study, which can be described as 'key individuals in collaboration with a local NGO providing INSET' in Mpika, Northern Province. It is a bottom up scaling up from an regional initiative taken by two expatriates. Fr. Carey and Sr. John Vincent provided in-service training workshops on the CtC approach for schoolteachers in Northern Province since 1981. Subsequently, they established the ICL in 1985. After they left Mpika, local enthusiastic teachers took over the training and mobilised other teachers to join the programme. Currently, both the MOE and UNICEF recognise Mpika as the most active area in implementing CtC activities in Zambia (Gibbs, 1997).

This chapter identifies four key people who have contributed to the development of the CtC activities in the region. It also examines how they became believers of the CtC approach and what their roles in the programme have been. The following section examines the impact of the ICL workshops on scaling up the CtC programme among schools. It studies how and whether the schools in two districts, which have received the workshops, are currently implementing the programme. The next section focuses on scaling up CtC within a school. By using Kabale Primary School as an example, it examines how the programme went to scale from teacher to teacher and from class to class within the school. Finally it identifies some enabling factors and constraints in scaling up the CtC programme in the region.

7.2 Geographical and social backgrounds of Northern Province

Mpika is a main town in Mpika District, one of the 14 districts in Northern Province. It is around 650 km away from Lusaka on the main highway to Tanzania. Mpika is also on the Tazara Railway line, which links Kapiriposhi to the port of Dar es Salaam. The

Tazara Railway provides much of the employment for those who live in Mpika. According to the 1991 Poverty Survey (CSO, 1993), 79% of the population in the Northern Province were categorised as extremely poor. It meant that their average monthly incomes were not sufficient for the purchase of the most essential items. Moreover, in rural areas in the Northern Province, 90% of the population were similarly classed as extremely poor and this was the highest proportion amongst all the provinces (Kelly 1994, pp.9-10).

There was the educational reform started around 1975 and continued until the early 80s when the funds run out. The emphasis was education for development and making education relevant to life. One aspect of reform was to encourage teachers to form school based Teachers' Centres. Carey and Vincent started their INSET at those teacher centres as part of the educational reform.

Several key individuals have played crucial roles in developing CtC activities in the Northern Province. They are Father Carey, Sister Vincent, Kangwa, Paul Mumba and Clement Mumbo. The following section will review these individuals' case histories in relation to the CtC activities.

7.3 Case histories of four key people who promoted the CtC programme

As is discussed in Chapter 5, one of the methods employed in my field research is examination of case histories to reveal key individuals' involvement with the CtC programme over the period. In each case study, key people were identified.

The main questions asked in the semi-structured interviews were as follows;

- i.* What is your background? / Why did you become a committed teacher?
- ii.* How did you come to know about the CtC approach and why did you become convinced that it would work?
- iii.* What is your involvement with the CtC programme in Zambia?

The key people identified in this case study in Mpika were;

- Fr. Frank Carey (Catholic Father established the ICL)
- Mr. Patrick Kangwa (Primary School Teacher and CtC Co-ordinator in Mpika)
- Mr. Paul Mumba (Primary School Teacher in Kabale)

- Mr. Clement Mumbo (Primary School Teacher in Kabale and a former CtC Co-ordinator in Chinsali)

7.3.1 Fr Frank Carey

(i) Personal background

Carey came to Zambia in 1963 as a priest in Mbala-Mpika Diocese in Northern Province. After learning the local culture and language, he worked as a religious teacher in secondary schools in the Bemba speaking areas in Northern Province. From 1975 to 78, he worked as the first Inspector of Religious Education at the Inspectorate, Ministry of General Education & Culture in Lusaka.

Carey describes his work at the Inspectorate was “to help launch this [religious education] syllabus and also to establish the TTCs and training teachers to use the new syllabus. The emphasis of the new syllabus was more on human development than religious doctrine” (Carey, interview on 2/11/1998).

(ii) The introduction of the CtC approach

Carey went back to UK in 1979 to start his PhD at the Institute of Education, University of London. The title was “Conscientization and In-service Education in Zambian Primary Schools”. During this period, he met Hugh Hawes and learnt about the CtC approach there. He explains why the CtC approach was valuable to Zambia.

“After living in Zambia for 15 years, I learnt the enormous problems caused by the low status of women and children. I became convinced that education should empower them. I was struck by Hugh Hawes describing education in Uganda as “robbery without violence”. It means that the irrelevance of education in Uganda was like robbing children without using violence. And so I wanted to get involved in relevance, using the CtC methods.

CtC is an approach to empower children and teachers by bringing relevance of education. It trusts that children can play an active part in promoting the health of their own and younger brothers and sisters. It demystifies the very complex scientific concepts and makes them available for the poor. CtC made an indispensable contribution towards sustainable education innovation within Zambia and within Africa” (Carey, interview on 2/11/1998).

(iii) Involvement with the CtC programme

Carey's main contributions to the CtC programme in Zambia were as follows;

- i.* INSET workshops for local teachers in Northern Province
- ii.* Material development
- iii.* Establishment of the ICL
- iv.* Organisation of the national launching seminar of the CtC programme

i. INSET workshops for local teachers in early the 1980s

Carey went back to Zambia in February 1981 and started INSET workshops for local primary teachers on the CtC approach in collaboration with Vincent. They offered their support for INSET to DEOs and PEOs in 16 districts in Northern and Luapula Provinces. All the DEOs and PEOs were supportive. 50 to 80 schools from each district were selected by DEOs, inspectors and head teachers. They suggested that one teacher from each school should attend the workshops. Carey and Vincent travelled to districts and ran four-day sessions. In each session, around 65 to 70 teachers attended.

ii. Material development

Carey and Vincent tried to adapt materials obtained from the CtC Trust to suit the Zambian context. They also developed texts such as "Child-to-Child in Zambia" (ICL 1987) and "Women and Children First" (Carey and Vincent 1988).

iii. Establishment of the ICL

Carey and Vincent raised funds through the Mbala Diocese and church organisations abroad to organise the INSET workshops. Although the meetings were supporting teachers under the MOE, there was no financial support from either the local or national governments. Carey describes how the ICL was funded in 1985.

"Sr. Vincent and I established the ICL in Mpika under Mbala Diocese. At the ICL, we continued INSET for teachers on CtC in Northern Province. These seminars were well received by those teachers who could participate. I negotiated with the church administration that the ICL's leadership training was not only for religion, but also for the whole human development. The diocese agreed that 50% of my time and the ICL's fund were allocated for health, education and social welfare without any reference to the church or religion"(Carey, interview on 2/11/1998).

The establishment of the ICL gave more institutional support for INSET and the CtC programme. The ICL could accommodate teachers who attended workshops and provide necessary expenses.

iv. Organisation of the national launching seminar of the CtC programme

Carey and Vincent facilitated to the launch of the CtC programme in Zambia.

“In 1986, I asked Hugh Hawes at the CtC Trust in London to support the first national seminar in 1986. As I taught the children of Kenneth Kaunda in their secondary school, I knew him personally. I could explain the CtC approach to him and convinced him to participate in this national seminar”(Carey, interview on 2/11/1998).

AIDS became the major killer of children in the late 1980s. As Vincent and Kangwa were organising the CtC workshops very well, in 1987 Carey became involved in a community based comprehensive AIDS programme in Copperbelt (Carey, interview on 2/11/1998).

7.3.2 Mr. Patrick Kangwa

(i) Personal background

Kangwa's interest in teaching developed from his rough experiences while studying at school. In his remote school in Chinsali, his teachers were all rather authoritative and often gave corporal punishment to pupils. Teachers' moral was low. To increase their own time, they frequently designated some elder children to teach younger ones. These elder children often beat younger ones. Many children left school because of that roughness.

Kangwa describes that “it made me very sad. I faced these roughness throughout in the primary and secondary schools. So I was thinking about how to become a good teacher for children” (Kangwa Interview on 14/11/1998).

He became a teacher in 1979. At this time, there were very few textbooks in the primary schools and education was among the lowest priorities in Zambia. He explains how he was different from other teachers. When the educational inspector came to Kangwa's school, he stated that the medium of instruction should be English. However, Kangwa argued that it should be the Zambian language, in order to accommodate children to understand the contents. This made the head and other teachers recognise that he was interested in improving students' learning. It was this interest that resulted in him being

selected to attend a workshop organised by Carey and Vincent in 1981 (Kangwa Interview on 14/11/1998).

Kangwa's personal background shows that he was already interested in becoming a good teacher for children before he learnt about the CtC approach.

(ii) The introduction to the CtC approach

When he learnt about the approach, it reminded him of what he went through in his school days. He was already looking for methods that would improve his teaching.

“When I learnt an alternative method like CtC, I thought this was what I needed. Also even if there is no apparatus in school, you can teach about health, as there are so many materials around you. CtC also helps the community by linking what you learn in school and what you see in the community.

I believe that in Child-to-Child, we are talking about child-centred. But as teachers, we are in fact teacher-centred. With CtC, for the first time, we teachers keep quiet for some time and listen to children, that is empowerment for children” (Kangwa, Interview on 14/11/1998).

Although he became a supporter of the CtC approach, it was difficult for him to convince others that CtC was practical in the classroom situation. In 1985, he and his students started arm circumference measurement for babies, which showed which babies were malnourished in their communities. Children were able to check the health status and the survey was about the lives of the community. Children also conducted surveys on immunisations and others.

“A health worker observed and approved what children in my class were doing. This gave me confidence that the CtC approach could work even in the classroom” (Kangwa, Interview on 14/11/1998).

His experience indicates that while innovative teachers are enthusiastic enough to apply new ideas in their teaching methods, they also need some assurance from others.

(iii) Involvement with the CtC programme

Kangwa played a crucial role in scaling up the CtC approach both nationally and regionally. In the national level, he presented his CtC work and classroom experiences at the official CtC launching seminar in Lusaka in 1986. Also he was invited to the Second CtC National Workshop in David Livingstone TTC on INSET in December 1990, as his work in Mpika was recognised by UNICEF and the MOE.

Regionally, he worked with Carey and Vincent since 1985 and demonstrated practical applications of the CtC approach in his school for the ICL workshops. After Carey and Vincent left Mpika in 1989, Kangwa took over their work of providing INSET in Northern Province. The following section will describe his main contributions in the province;

- i. Implementation of CtC workshops,
- ii. Communication with other teachers and the CtC Directorate,
- iii. Identification of and collaboration with other enthusiastic teachers

i. Implementation of CtC workshops

Since 1990, he tried to continue the CtC workshops at the ICL for local teachers. However, the new the ICL directors were not always supportive to the workshops and Kangwa had to convince them how the CtC approach was valuable. In 1990, he worked in his school in the morning then worked at the ICL in the afternoon for the CtC programme. He explains why he continued to do so.

“I just wanted to keep alive the small fire that the programme was here. At that time, the ICL administration was not supportive and so all the people were against the programme and me. It was rough and a struggle. Fortunately some enthusiastic teachers, like Clement Mumbo in Chinsali and Chongo in Mbala, were writing what they were doing in their schools. So I showed these reports to the new director. Then he was gradually convinced that maybe it was a good programme. The biggest problem was to convince the ICL in 1990” (Kangwa, interview on 24/11/1997).

Kangwa organised the INSET workshops in 5 districts in Northern Province. These workshops for CtC school co-ordinators were held almost every term between 1990 and 1993. He drove the ICL minibus, picked up the co-ordinators, ran the seminar for 3-4 days and then drove them back. They also produced reports of their CtC activities.

In February and March in 1998 Mumba and Kangwa facilitated one-day school-based CtC workshops for 17 schools nearby Kabale in Mpika. This was funded by a British NGO. They found such school based workshops more effective than the ICL workshops inviting teachers from different school. This school-based workshops will be discussed further in section 7.6.3.

ii. Communication with the CtC Directorate in Lusaka

In 1990, Kangwa also started sending the reports from school co-ordinators to the CtC Directorate in Lusaka. This aimed at informing the Directorate in Lusaka about CtC activities and their efforts in Mpika. This enabled him to be invited to the second national workshop in David Livingstone TTC on INSET in 1991.

iii. Identification of and collaboration with other enthusiastic teachers

The ICL Director became fully supportive to the CtC programme in 1990. He asked Kangwa to have another resource teacher to assist the ICL workshops, and Kangwa recommended Clement Mumbo, who was the CtC co-ordinator in Chinsali District. As a result, the Director requested the educational office to transfer Mumbo to Kabale Primary School and to work with Kangwa in 1992. In the same year, Kangwa also moved to Kabale. In Kabale, Paul Mumba was working creatively. Kangwa therefore asked Mumba to help them with the workshops. Consequently, Kangwa, Mumbo and Mumba created a critical mass of innovative teachers in Kabale and worked together to organise the workshops at the ICL.

iv. Continuity of the individuals' commitments and CtC activities

The ICL stopped funding for the CtC programme in 1995, however, Kangwa, Mumba and Mumbo continued their activities. Kangwa describes their situation since 1994.

“In 1994 I was the acting director of the ICL. That was very good, because I could do the CtC work [without negotiations].

In 1995, a new director came to the ICL. He took all my and Clement's responsibility there and the fund was stopped from the ICL. He was not supportive and he left the ICL in September 1997 without being convinced. But the programme continued because we continued the training nearby Mpika” (Kangwa, interview on 14/11/1998).

From September 1995, Kangwa undertook a diploma course in health education at Leeds University, UK for a year, sponsored by the British Council. During his absence, Mumba and Mumbo continued occasional teacher training workshops for teachers at Kabale and neighbouring schools.

7.3.3 Mr. Paul Mumba

(i) Personal background

Mumba became interested in teaching in his childhood. He was the eldest of the eight children in his family and used to enjoy teaching his younger siblings and friends. They

all received encouragement from their father who valued education. Mumba used to read many successful people's biographies and learnt they never gave up their hope in difficult times. He related what he learnt from these books to his commitment to education.

"I was very much impressed how much they were trying to achieve something in and how much they could make a difference in the world they were living in. So I could also make a difference in my country and in the teaching profession. Now Zambia is poor and educational quality is going down. But something can be done to make the work easier for the teachers, and to make the learning enjoyable for children so that they are motivated to learn more on their own" (Mumba, interview on 5/4/1998).

After receiving teacher training at Kasama TTC, he worked in a school in a very remote village. He enjoyed teaching topics that he considered to be useful and relevant to children's daily lives. He moved to Kabale in 1988.

Mumba has been creative in his school. In Kabale, he started a drama club with children. It was originally for improving English. Children went out and learnt problems in the community, such as environmental issues and AIDS. They discussed about the problems and possible solutions. Their dramas were well received and they won first prize in a national drama competition in 1991. They performed on Zambian television and were invited to a trip to Zimbabwe. He explains his experience of children's dramas.

"The story was based on a real situation. We felt we were achieving in solving some of the problems. So children came up with a lot of ideas and inputs from their own experiences that was fascinating. I felt they were like adults knowing what was going on in among the adults. That helped me a lot to understand their ability (Mumba, interview on 15/11/1998).

Even before encountering the CtC approach, he was already convinced by children's ability and potential through his experiences in the drama club. This prepared his readiness to start the CtC programme in his class later.

(ii) The introduction of the CtC approach

Mumba learnt about CtC in Kabale in 1989 when Kangwa invited Mumba to attend a workshop. Mumba recalls how he started using the CtC approach.

"I was always looking for a method to improve my teaching so I liked the idea. But I took some time to start practising it. It was not so easy

to practise from the very idea from the seminar. The ideas were somehow abstract and the teachers attending the seminar could not see how the ideas could be used in a real classroom situation. After trials and errors, I became confident in using certain methods. Even now often I face different challenges and try various things" (Mumba, interview on 15/11/1998).

He already had readiness to utilise CtC, however, he also needed some time to apply it into practice.

(iii) Involvement with the CtC programme

Mumba explains what inspired him most in different aspects of the CtC approach in his report, "Child-to-Child, Twinning Project and Community Study Pairs" (1993);

"One of the principles behind C-to-C that struck me most was found in the introduction of the book 'Child-to-Child in Zambia' and I quote

"C-to-C emphasises learning through experience rather than being told things. The children conduct their own surveys, perform their own experiments and discover answers for themselves. They are encouraged to **think, observe, explore and invent**.. it encourages the independence of thought that helps form leaders, leaders in the process of change.. Children learn to work together and help each other.. everybody teaches and everybody learns from one another.. no competition in examination marks "(the ICL 1987, p.2).

I set myself to experiment with the above information in a project that was to take almost a year beginning from December 1992 to date, November 1993"

(Mumba 1993).

Chapter 4 discussed that the CtC approach has various dimensions. The aspect of the CtC approach that inspired Mumba most was on children's improved learning processes through collaboration. Hawes (1988 p.4) and Tay (1989 p.143) view that the CtC approach is not only for health education, but also a mean to enhance quality education (section 4-1-2). Mumba shares the same view as theirs.

Mumba has tried different applications of the CtC approach in and outside of his classroom. His main CtC applications are as follows;

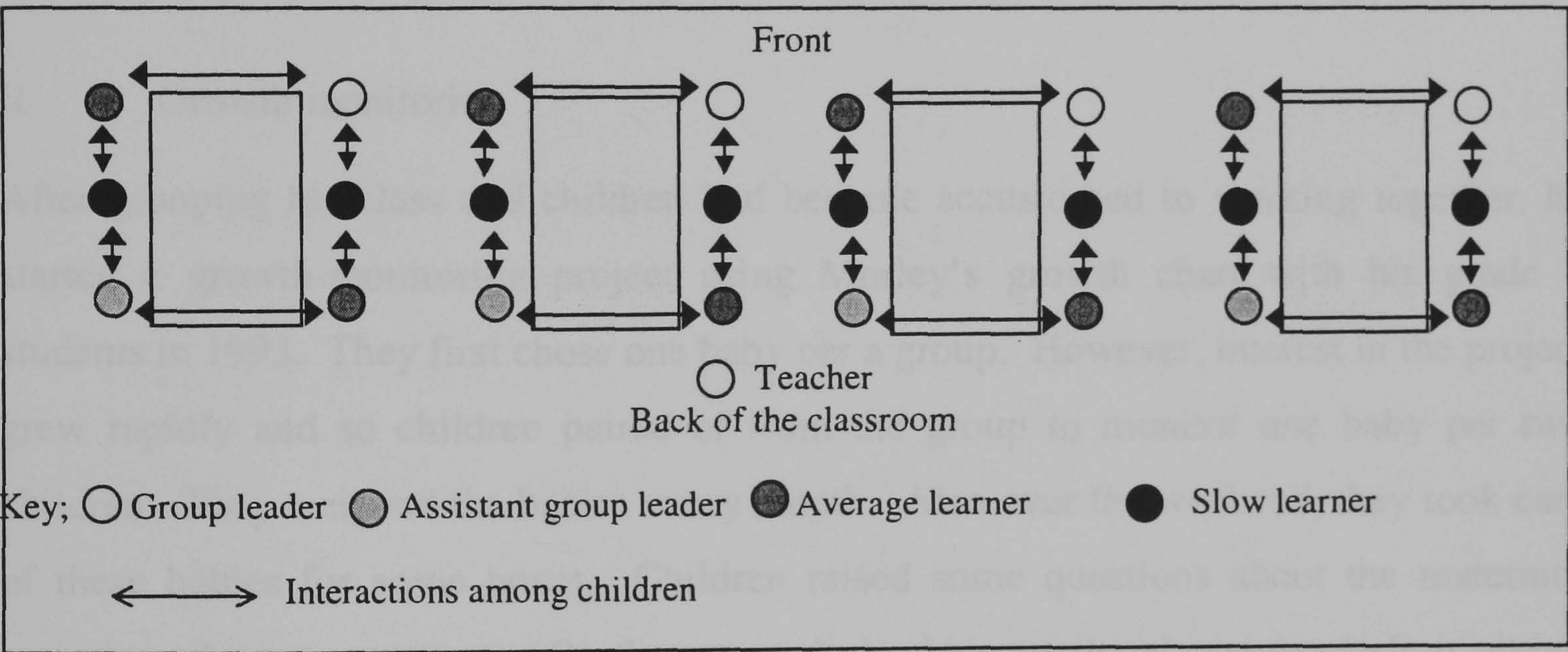
- i. Grouping children
- ii. Growth monitoring
- iii. Democratisation of classrooms

iv. Training of other teachers in both at the ICL and Kabale School

i. Grouping children

Mumba tried to maximise children's interactions and collaborations by grouping. His class is divided into 9 groups and each group consists of 6 children. These 6 children comprise of one group leader and one assistant leader who are fast learners, 2 slow and 2 average learners (Mumba 1993). In the group, children help each other to learn both academic and health related topics during and after school. They sit together as drawn in Figure 7.1. Mumba calls this class arrangement as "Child-to-Child Sitting Class Plan" (Mumba 1993).

Figure 7.1 Schematic Representation of Seating Arrangement within Mumba's Classroom



The slow learners are seated in the middle as fast and average learners can help them during the lessons. The fast learners can also help the average learners in front of them. By deliberately mixing children with different abilities, children can help each other. Even if the slow learners do not understand the teacher's explanation immediately, the fast and average learners can re-explain with their words. The fast and average learners benefit from revising what they have just learnt and teaching others.

In groups, their "activities include studying together, researching and visiting each others' residences to share ideas of development at their homes, what they can do to improve their home environments, evaluating situations, correcting situations and sharing what they can with other groups in the class" (Mumba 1996).

Mumba describes how he teaches these groups in every lesson.

“First of all I teach the basic topic then let the children discover the contents. Once they discussed in their group, they exchanged ideas with other groups. I move around the groups and finds out what is going on from the slow learners. When I talk with them and if they understood the concept, I know the group is working well”(Mumba, interview on 15/11/1998).

When the group leaders have difficulties in understanding, they come to Mumba at the back of the classroom. If one group fails to pass the knowledge to the slow learners, other groups can also help this group. Mumba has observed that through the group work, children have improve their life skills such as problem solving, decision making, critical thinking, communication and developing empathy (Mumba, interview on 15/11/1998).

With the group work, there is a danger that fast learners just give right answers to slow learners without explanation. Also fast learners can bully and dominate the group discussions. To avoid these adverse behaviours, Mumba observes their interactions closely and gives small tests everyday to monitor individuals' understanding.

ii. Growth monitoring

After grouping his class and children had become accustomed to working together, he started a growth-monitoring project using Morley's growth chart with his grade 4 students in 1993. They first chose one baby per a group. However, interest in the project grew rapidly and so children paired of from the group to monitor one baby per two children. They weighed the babies every month. Also over the weekend, they took care of these babies for some hours. Children raised some questions about the maternity periods and young mothers. So they started checking mothers' weights before giving birth as well. Mumba checked English composition of their reports on growth monitoring.

Mumba has observed some attitudinal and behavioural change among children. They have learnt not only the physical health statuses, but also the social and economic factors that caused the babies' mal-nutrition and poor growth rates. Consequently, they become more sympathetic towards slow learners realising these children may have been deprived when they were babies. They also became more sympathetic to girls realising what women have to go through during and after pregnancies (Mumba interviewed on 5/4/1998).

Also Mumba discovered that children wanted to discover more on their own, rather than being taught by the teacher. They asked questions which were beyond primary school

curriculum. They were motivated and eager to learn. Their performances improved as they have learnt how to learn by themselves.

iii. Democratisation of classrooms

Mumba argues that applying the CtC approach in the classroom requires democracy and participation. However, in the Zambian context, the traditional teaching methods are didactic and non-democratic. Mumba therefore conducted research and produced a report, "Democratisation of Primary Classrooms in Zambia" (1996). In this study, Mumba examines how to set up a participatory atmosphere in the classroom, to promote children's rights and to accommodate girls in fully participatory in learning.

"Democratisation paves a way for any teacher wishing to implement the Child-to-Child methods of teaching and in the promotion of girl child education" (p. 2).

"The CtC method in classrooms has failed to take off effectively in most schools due to its democratic characteristics as most teachers prefer the traditional teaching to child centred methods. While we envy developments in western countries and import their education systems, we fail to accept the characteristics that accompany such innovation. I have observed that teachers attempted to teach democracy, but find it difficult to practice it themselves on the children under their care. This is because children are regarded as incompetent and immature to participate in their own learning"(p. 5).

In other words, in order to apply the CtC approach in classrooms, it is a prerequisite for teachers to change their attitudes and perceptions towards children. This is a fundamental issue of scaling up the CtC approach among adults who are neither living in democratic societies nor used to respecting children.

As part of Mumba's democratisation of the classroom, the students evaluate his teaching at the end of the day and give him written comments. He respects his students' opinions and regards this evaluation as "the most important part" as it encourages him to improve his work.

iv. Training of other teachers in both at the ICL and Kabale School

Besides his contributions at the ICL workshops, Mumba has also helped his colleagues in Kabale to apply the CtC approach in their classes through personal interactions. This will be described further in section 7.6. Moreover, he has been leading the Classroom Health Materials Project, funded by CAFOD and the Moral Trust in UK since 1998.

Under this project, he helps his colleagues in Kabale to develop practical lesson plans using the CtC approach.

7.3.4 Mr. Clement Mumbo

(i) Personal background

Mumbo was born in Kasama District, Northern Province. After graduating from Kasama TTC, he became a teacher in 1985. He taught in one of the remotest villages in Chinsali District for three years. Then moved to Lubwa Primary School in 1988. He explains how he became a committed teacher.

“From the time I was in school, I was thinking whatever job I would do I would do whole-hearted. It is difficult to explain but I believed once I take up something, I should learn about it very well and will remain committed to it. I was searching for something, which satisfy my personality” (Mumbo, interview on 27/11/1997).

Although he learnt in the TTC, he looked for better methods of teaching, as “instead of just being content with what I learnt, I wanted to discover myself” (Mumbo, interview on 27/11/1997).

However, before learning about the CtC approach, he was a very different teacher. He completed his diploma thesis “Experience of Child-to-Child Programme and its Challenges” in 1996 by correspondence. In this thesis, he confesses some negative points of his teaching during his first three years;

“During lessons, I tolerated no noise, no movements, but allowed children to ask questions. Rarely children did ask me questions without my instructions. Children never participated in lessons to the best of their abilities. I knew very little about the rights of children hence I never protected them. I taught children what were in books and not things that mattered to them. There was a big gap between the teacher (me) and the pupils. So children learnt in fear. ‘Failures’ or slow learners were always laughed at by friends and I just observed” (Mumbo 1996 pp.1-3).

This reveals that he was a typical authoritative teacher and praised fast learners only. Fortunately, as a young and enthusiastic teacher, children’s poor performances and low attendance rates worried him and made him look for better ways of teaching.

(ii) The introduction of the CtC approach

In 1988, he participated in the ICL workshop. He was interested in children's sports, quiz and dramas, so he thought he could use the CtC concept in these activities. Also he was already looking for a methodology that would improve his teaching and children's learning. After this first workshop, he was fully motivated to implement the CtC programme in his school. Mumba also explains his understanding of the CtC approach.

“CtC believes in the power of children and their potential. Once children realise such ability and potential to help themselves, they can also develop the potential to help others within their school, home or community. But the children's power cannot be developed without teachers' and family members' help and the community's appreciation. So this programme is not only about children, but also about teachers, family members and people around that particular school. It needs to be comprehensive.

Another aspect of the CtC programme is to promote primary health care activities. If children can learn some basic health knowledge and skills to protect their health through different subjects, that makes large difference to their lives. CtC emphasises that education should address the child's real life problems” (Mumbo, interview on 27/11/1997).

Similar to Mumba, Mumbo was inspired by belief in children's potential underlined by the CtC approach.

(iii) Involvement with the CtC programme

Mumbo's involvement for the CtC programme is as follows;

- i.* Organisation of the Workshops at the ICL
- ii.* Organisation of Workshops outside of the ICL
- iii.* Extending the CtC approach to community schools

i. Organisation of the Workshops at the ICL

Mumbo became a regular participant of CtC workshops at the ICL since 1988 and helped Kangwa as a resource person. As is described in section 7-3-2, Mumbo moved to Kabale Primary School in 1992, in order to work with Kangwa for the CtC programme. They were given an office at the ICL and organised the INSET workshops.

ii. Workshops outside of the ICL

After the ICL stopped funding the CtC workshops in 1994, they had to limit their activities and held workshops once in a while when some funds were available. In 1994, UNICEF funded MOE to introduce the CtC programme in all primary schools through workshops country wide. Kangwa and Mumbo were invited to Kasama to organise a workshop for PEO and DEOs. Afterwards, UNICEF provided some more funds for each district to run one workshop for the average 15 teachers from 15 different schools (Mumbo, interview on 11/11/1998). After 1995, Kangwa, Mumbo and Mumba spent more time to organise workshops and develop CtC activities in Kabale school. They continued supporting neighbouring schools and teachers.

iii. Integration of the CtC approach in community schools

In June 1996, Mumbo came to Lusaka for helping Zambia Open Community Schools (ZOCS), an NGO supporting community schools. In 1997 and 1998, he was seconded to ZOCS in Lusaka as an education adviser. He was also involved with pre-service and in-service training for teachers in the community schools. As section 6-2-4 in Chapter 6 described, Mumbo also participated in developing SPARK, the syllabus for the community schools. There are many principles and elements of CtC in SPARK.

This section examined four key individuals' involvement in the CtC programme over the period and examined their roles in scaling up the programme in the Northern Province. The workshops at the ICL continued until 1995 because of the personal commitments of Carey, Vincent, Kangwa, Mumba and Mumbo. There was a lack of the consistent institutional policy and support from the ICL as an NGO. Also the formal educational system in Zambia could not support the programme efficiently.

7.4 The impact of CtC workshops on schools and Kasama and Mbala Districts in the Northern Province

This section examines the impact of the ICL workshops on scaling up the CtC programme among schools. It studies how and whether the schools, which have received the workshops, are currently implementing the programme. This helps to clarify how the training workshops contribute to scale up the programme among schools in these districts. It also examines the sustainability of the programme after the workshops stopped.

In April 1998, Kangwa and I visited nine of those schools to which the ICL used to provide regular workshops in Kasama and Mbala Districts. In these schools, we had discussions with the head teacher and a few teachers who were CtC committee members.

Main questions put to the group were as follows;

- (a) What are the numbers of students and teachers in the school?
- (b) Is there a CtC committee and/or CtC spearheading group (SHG) in the school?
- (c) What is the number of children in the CtC SHG?
- (d) What is your understanding of the CtC approach?
- (e) What are the existing CtC activities inside and outside of the school?
- (f) What are the enabling factors and constraints to implement the CtC programme?

We also visited the Provincial Education Office in Kasama and DEOs. Table 7.3 summarises the names of schools, numbers of students, the existence of the CtC committees, numbers of children in the CtC spearheading groups (SHG), and main CtC activities. In general, a CtC committee consists of a few teachers who are also called CtC school co-ordinators. In some schools, the committees involve and/or consult health workers and parents.

Table 7.1 Nine schools which received CtC INSET and current CtC activities

	No. of students in school	CtC committee	No. of Children in CtC SHG	Performance at assemblies	Other clubs working together	Twinning	Survey	CtC became less active
(A) Malama Middle Basic School	900	✓	20		✓	✓		
(B) Chiba Middle Basic School	1035	✓	18	✓		✓		
(C) Mbala Basic School	590	✓	25	✓	✓			✓
(D) Mbulu Basic School	1069	✓	50	✓				✓
(E) Mulungshi Middle Basic School	409	✓	60				✓	✓
(F) Niamukolo Basic School	543	✓	40		✓	✓	✓	
(G) Chifwani Basic School	1500	✓	50			✓	✓	
(H) Kasama Demonstration Basic School	1232	✓	30	✓				✓
(I) Musa Basic School	680	✓	20	✓				✓
Average	844		35					
No. of Schools		9	9	5	3	4	3	5
Proportion		All	All		A third		A third	

All nine schools have CtC committees among teachers and CtC spearheading groups. There is only one teacher in Mulungushi Middle Basic School who participated in the ICL workshops for several times. The other teachers in the CtC committees are selected in their teachers' meetings at schools. Some heard about the programme in their TTCs or former schools. Almost all teachers, who were interviewed, understood CtC as an approach to health education.

All schools are implementing some CtC activities such as children in SHG present health related poems and dramas at the assemblies (4 schools), 'twinning' among children (4 schools), health survey in their communities (3 schools). Three schools implemented health surveys on immunisation, malnutrition of under-five children using arm-circumference, and out of school disabled children in the community.

'Twinning' means that each student is paired with another one, for example, a student in Grade 7 is twinned with a junior one in Grade 2. When they come to school, the elder ones see and check whether their 'twin sisters' or 'brothers' are healthy and clean.

Teachers in four schools mentioned they have other clubs that work closely with the CtC spearheading groups. These clubs are Red Cross, drama, Chongololo (a centipede in Zambian language) nature conservation, anti-AIDS and girls education. Teachers in five schools mentioned their programmes become less active than the time when the ICL was providing regular workshops.

Overall, the nine schools are still continuing some CtC activities. The whole school programme has been dependent on individual teachers who are appointed as CtC co-ordinators. At least, a CtC committee among teachers has been institutionalised into each school's activities. Therefore, when the CtC co-ordinator who attended the ICL workshops was transferred or died, the school continued appointing successors. Three newly appointed CtC co-ordinators in Chifwani Basic School, for example, were enthusiastic in twinning all the students and introducing health surveys in lessons.

7.5 Scaling up the CtC programme within a school: a case study of Kabale Primary School

Chiwela (1996) identifies 13 schools that are actively implementing the CtC programme in a comprehensive way (p.11). Among these model schools, Kabale Primary School in Mpika is referred as "the most remarkable example of a Child-to-Child school

programme”(Gibbs 1997, 3.3) in the latest evaluation of the Child-to-Child Programme in Zambia. The MOE and donor agencies such as UNICEF recognise its creative CtC activities.

This section therefore examines how a large proportion of teachers in Kabale started using the approach. Kabale’s experiences are valuable in order to understand how an innovative programme scales up within a school. Kabale has unique advantages for example, it is next to the ICL and the three innovative teachers have worked together since 1992. Almost all teachers in Kabale have received some training workshops on CtC. Currently there are about 10 teachers who are actively using the approach in their teaching (Mumba, interview on 15/11/1998, Mulenga, interviewed on 8/6/1998). I interviewed four teachers, recommended by Mumba and Kangwa. I also observed their lessons to learn how they understand and utilise the CtC approach in the classrooms. These teachers were as follows;

- Ms. Elizabeth Mulenga (G6B) (8/6/98)
- Ms. Threasa Milandile (G6B) (8/6/98)
- Ms. Fisyani Chilongo (G4B)(8/6/98)
- Ms. Annie Mwape (G7D) (8/6/98)

Main questions asked were;

- (a) What do you understand by the CtC approach?
- (b) Why did you start using the CtC approach?
- (c) What are your applications using the approach?

7.5.1 Understanding of the CtC approach

All the teachers understood the CtC approach as a teaching method of health and children’s collaboration in their learning. For example, Mulenga describes her understanding as follows.

“CtC is not a club activity. It is a method of teaching. It is also teaching about health in different subjects. For example, when they learn about Malaria, they should know how to prevent Malaria at home and practise it” (Mulenga interviewed on 8/6/98).

7.5.2 Initial motivations to use the approach

All the four teachers mentioned they learned about CtC through workshops, and their colleagues helped show them practical applications. For example, Mulenga became interested in CtC through observation of Kangwa, Mumba and Mumbo's activities. She thought grouping and growth monitoring would improve her teaching.

“When I first heard about the CtC methods, I did not understand them clearly. So I was not interested in using them. But in 1995, the students in my Grade 5 Class were not performing well. I knew that Mr. Mumba's class was doing very well. So I asked him about the CtC approach and group work. Mr. Mumba explained me the methods fully. He also invited me to his lessons”(Milandile interviewed on 8/6/1998).

Now Mulenga and Milandile are helping other colleagues to apply the CtC approach. Their cases give an important example of how a teacher starts using a new idea and then becomes a resource person for others. Milandile's first motivation to use the CtC approach was to improve her students' performances. Since she had such a need, she had more readiness and will to learn about CtC from Mumba. As a result, her students performed better and she gained confidence in the approach.

After attending some CtC seminars in Kabale in 1996 Chilongo divided her pupils into 8 groups. Also Mumba, Kangwa and Mulenga helped her by sharing their experiences. Although she heard about CtC while she was learning at Kitwe TTC, she thought it was for pre-primary schools (Chilongo interviewed on 8/6/1998). Muwape also started grouping her class as Mumba and Mulenga helped her.

7.5.3 Applications using the approach

All four teachers have tried grouping their classes, then a few have conducted growth monitoring, integrated health topics into various subjects and conducted other health surveys. They have observed some progress in their students' performances.

“After joining the CtC programme, I found that my teaching was progressing. I see the children bringing back what they learnt to their home. I use grouping in my class and this helps children's learning and my teaching. I introduced growth monitoring in my class and each group 'adopted' a baby” (Mulenga interviewed on 8/6/98).

“After introducing the group work, they improved their performance a lot. Now I learnt how to integrate health into different subjects.

Children in my class also started the growth monitoring from the beginning of this year” (Milandile interviewed on 8/6/1998)

Chilongo and Mwape describe their experiences with grouping and some positive change.

“Grouping is really helping me a lot. I can see a lot of improvement. Children developed leadership skills and caring each other. Relationships among pupils have improved. Since this school is very big, it is difficult to see all the children’s work by myself. But with the groups, leaders and other children can help slow learners. I also encourage children to discover things on their own. When they discover the answers, these stay with them. The only disadvantage of the grouping is that there is noise in the class all the time” (Chilongo interviewed on 8/6/98).

“Through group work, children sometimes bring much more ideas, which I don’t even know. Children use the ideas not only in the school but also at home. Some parents are saying their children have improved a lot. They now share their learning after school as well” (Mwape interviewed on 8/6/98).

Although all teachers in Kabale received the CtC workshops, some of them started using the approach after receiving support from resource teachers. The scaling up process is slow through personal interactions and mentoring over the period. Teachers need direct observations of lessons as well as evidence that it improves their teaching and children’s learning. Even committed teachers need time to understand the concept and to apply it into practice.

From Kabale’s experience, creating a critical mass of resource teachers in one school through deliberate transfers is a slow but effective strategy to meaningful scaling up of innovations.

7.6 Enabling factors of going to scale

The previous three section examined three different levels of scaling up the CtC programme in Northern Province. 7-2 discussed how key individuals became involved in and contributed to disseminate the CtC programme. 7-3 examined how schools that received the ICL workshops are currently implementing the programme. 7-4 studied how the programme has scaled up among teachers in one particular school. From these experiences in Northern Province, some of the interrelated enabling factors to scale up the CtC activities are summarised in Table 7.2;

Table 7.2 Summary of enabling factors which facilitated scaling up

Three aspects	Enabling factors
(1) System change	i. The central government's approval
	ii. Access to external funding and training
	iii. A strong personal network under Catholic churches
(2) Quantitative change	i. Training workshops at an NGO
	ii. Supportive head and administration, district and provincial co-ordinators
	iii. Relevance to local situations
(3) Qualitative change	i. Identification of committed teachers as resource persons in the workshops
	ii. Creating a critical mass of 'concept and skills mastered' teachers in a school who can mentor and transfer their knowledge and skills to their colleagues
	iii. A long term commitments and enthusiasm of individuals
	iv. Children's improved performances and parents' positive feedback
	v. Recognition by educational offices and donors
	vi. School based workshop
	vii. Development of CtC applications in classrooms

7.6.1 Enabling factors for system change

(i) The central government's approval

The central government's approval to launch the CtC programme in 1986 provided legitimacy to introduce the CtC approach, although Kangwa had to explain to the PEO that it is a national programme, not the ICL's in 1990. Also this enabled the DEO Chinsali to agree the transfer of Mumbo to Kabale.

(ii) Access to external funding

The training workshops organised by Carey, Vincent and Kangwa were funded externally through the Catholic churches' network. The funds covered training seminars, transport and other administrative costs. In Zambia, it is almost impossible to organise workshops without providing transport, food and daily allowance. the ICL provided the transport and food, but did not provide a daily allowance. This was sufficient to enable the teachers to attend the regular training. Although around 1995,

the ICL stopped the funding, the funds in initial 10 years were crucial for teachers in the province to learn about the CtC approach.

(iii) A strong personal network under Catholic churches

The personal networks Carey and Vincent had contributed to raise funds for INSET workshops and to institutionalise the CtC programme in Northern Province by establishing the ICL in 1985. Their networks also contributed to scale up the local CtC initiative to the national programme in 1986 and managed to involve President Kaunda and Hawes in the CtC Trust. As Carey describes,

“In Zambia people respect church related personnel and elderly people. Also even the high-ranking Zambian officials accept the advice from the expatriates who spend many years there” (Carey interviewed on 2/11/1998).

Such respect was useful to introduce the CtC approach and scale up its programme in Zambia.

7.6.2 Enabling factors for quantitative change

(i) Training workshops at the ICL and schools

The regular INSET workshops accommodated teachers to learn about the CtC approach and increased their number in Northern Province. The schools participated in the workshops were actively involved with the CtC programme. As is discussed in section 7-4, although some of the schools became less active, new teachers who never participated in the workshops continue the programme and all the schools still have CtC school co-ordinators, SHG and some CtC activities.

(ii) Supportive head and administration and regional educational officers

When head teachers are supportive and open to innovations, teachers are encouraged to use new approaches such as CtC. In Kabale, the head has been supportive to the programme and encouraged teachers to participate in.

Sometimes, regional educational officers hinder an innovation to be implemented. For example, in 1988, Carey asked the PEO for Kangwa's secondment to the ICL, however, it was not accepted. PEO told Kangwa that the CtC was not a government programme

and it was illegal. The DEO in Mpika was supportive and Kangwa could move to a school closer to the ICL in 1990.

(iii) Relevance to local situations

Since health issues were relevant to daily lives of students and teachers, teachers could find some health topics, some as malaria and growth monitoring, which were useful.

7.6.3 Enabling factors for qualitative change

(i) Identification of committed teachers as resource persons in the workshops

In workshops introducing an innovative teaching method, those who are talented and already interested in improving their teaching tend to understand and internalise it quickly, and then to apply it in practice. However, the majority of teachers are not so committed and/or talented and therefore it takes them a longer time to use the idea and to change their practices.

In this case study, such committed teachers include Kangwa, Mumba and Mumbo. They supported each other and worked closely to run the workshops. Their strengths were that they were not educational bureaucrats but primary school teachers who have hand-on experiences. Kangwa points out as follows;

“Teachers normally believe in what their fellow teachers are doing. I started with my class and then my colleagues looked at my lessons, then they were convinced. They also wanted their classes to do well”
(Kangwa, interview on 14/11/1998).

They knew exactly the problems and difficulties their colleagues faced and the methods which worked in their own teaching practices. It was therefore more convincing for others to opt in.

(ii) Creating a critical mass of 'concept and skills mastered' teachers

As is discussed in section 7-3, Kangwa, Mumba and Mumbo created a critical mass in the region and in Kabale School, which is effective in sustaining activities and creating the institutional memory. As a result, many teachers in Kabale utilise the approach in their teaching. Newly transferred teachers receive support from their colleagues on CtC. After being helped by the three, Mulenga and Milandile also became resource

teachers to support others. Even if Mumba, Kangwa and Mumbo are transferred to other school, Kabale is likely to continue their CtC activities.

This follows the “unbalanced model”, one of the Elmore’s (1996) models for scaling up educational change, which was discussed in section 3-10, Chapter 3. The unbalanced model involves concentrating a critical mass of relatively high performing teachers in a few schools. The model considers that these schools are designed to serve as places where new practices are developed and passed to other colleagues. Over the time, these schools would be deliberately staffed with larger proportions of new teachers who would be exposed to the norms of good practice.

This case study indicates that Provincial and District Education Offices may be able to identify other resource people and to transfer them deliberately in order to create another resource school. Also in Mbala and Kasama districts, some schools with committed teachers can function as CtC resource schools. The CtC directorate in MOE can give recognition to these individual teachers and schools and utilise these schools as models.

(iii) A long term commitments and enthusiasm of individuals

Although the INSET workshops were funded by the ICL, since 1990, it has been Kangwa who continued the CtC training together with Mumbo and Mumba. In short, it was their commitments, rather than the ICL as an organisation, that continued to keep the CtC programme alive in the region.

Moreover, among the nine schools visited across two districts, almost all the teachers interviewed had not attended any of the ICL workshops. They learnt from other teachers who had attended. This proves that there were knowledge and skill transfers among teachers. Also despite the termination of the ICL workshops in 1995, collectively these teachers commitments have kept the programme alive in the Northern Province.

(iv) Children’s and parents’ positive feedback and improved performances as an incentive to teachers

Teachers need a tangible reason for adopting new ideas, such as having their students improve their academic performances. Performance improvement is a clear and positive outcome, which is easier to recognise than health improvement. Additionally,

the education system is examination oriented with teachers, children, parents and educational officials being concerned with academic performance.

Mumba introduced group work and growth monitoring in his Grade 4 class in 1993. He continued to teach the same children until the time when they graduated at Grade 7. When these children had the national examination at the end of the Grade 7,

“all of the 50 students in my class performed extremely well, in comparison with other classes in Kabale, and also with other schools in the country. All have passed, and 37 out of 50 were accepted in the boarding schools” (Mumba interviewed on 5/4/1998).

As is described in section 7.5.2, Milandile started using the CtC approach, as she observed Mumba's students were performing well. Milandile, Mulenga, Chilongo and Mwape all found some improvement in academic performances and relationships among children, after introducing the CtC approach in their teaching.

In addition, Mumba and Mwape received the parents' appreciation as they observed improvement in their children's behaviours and academic performances (Mumba interviewed on 5/4/1998, Mwape interviewed on 8/6/1998). Such positive feedback from children and parents is a self-generating incentive for teachers to sustain the programme.

(v) Recognition given by educational offices and donors

Mumbo emphasises the importance of recognition by education officials, donors and researchers from outside of schools.

“We need to visit teachers and ask them how they are doing. Even researchers who come to the area and ask how we are doing. Somebody somewhere is still thinking of my existence here and thinking about what I am doing. This particular person came here specially for me. That provides a motivation [to continue the programme]”(interviewed on 15/11/1998).

Irrespective of whether or not incentives from the MOE are to be provided in the forms of cash or promotions, other approaches of 'keeping their spirit high', such as external monitoring, donor staff and researchers who visit schools and an acknowledgement letter from the DEOs. In recent years, because of the recognition by the MOE and UNICEF, Kabale School and neighbouring schools have been receiving visitors from

other regions of Zambia. This reminds the teachers that their efforts for the CtC programme are important (Mumbo interviewed on 15/11/1998).

(vi) School based workshop on CtC

In February and March in 1998, Kangwa and Mumba facilitated one-day school-based CtC seminars for 17 schools nearby in Kabale. This was funded by a British NGO. They asked all the teachers to attend and demonstrate short lessons using the CtC approach on different topics. Immediately after the each lesson, the teacher received feedback from their colleagues, Kangwa and Mumba.

On 31 March 1998, I observed and participated in one of the school-based workshops was held at Nyanji Primary School. The school has 4 teachers and 320 students. All the teachers and about 20 CtC spearheading group children participated in this workshop. Each teacher took turn to teach about primary health care, twinning and girl child education and children's right for about 20 minutes. Children, other teachers and resource people (Kangwa and Mumba) were mixed and seating in groups as students. I also sat with them. Teachers gave some questions to students to discuss. Questions included:

How do you help your twin sister/ brother? (twinning)

How many sisters and brothers do you have? (girl child education)

How many of your sisters go to schools?

How many of your brothers go to school?

Are brothers going to school more than sisters? Why?

Students discussed in pairs and groups to search for answers. After the lessons, some comments were given to the teacher from his/her colleagues and the resource persons. It was a fairly supportive and collaborative atmosphere and teachers were learning not only from resource persons but also from their colleagues.

On 8 April 1998, Kangwa and I also visited Chikwamda Middle Basic School, which received the school-based workshop from Kangwa and Mumba in March 1998. Four teachers who were CtC committee members explained CtC activities in the school. They indicated that the staff members appreciated the workshop and applied what they learnt into practice. Consequently, the school created five sub-committees of CtC, which were: twinning committee, primary health education committee; girl child education and human rights committee, health committee and recreation and first aid committee. Most staff members belong to one of the committees. In addition, the

school has tried to twin children in different grades and also in different abilities in learning.

Kangwa recognised that the reactions received from the participants of the school-based workshops were more positive than the reaction received after the ordinary ICL workshops. As the participants practised grouping and twinning of children during the seminar, they became more confident in applying these in their classes (interviewed on 31/3/1998).

Such workshops using actual CtC applications in the classroom setting appear to be more effective in transferring knowledge and skills to all the staff members than out-of-school workshops. Also school-based workshops can avoid personal jealousies towards workshop participants from their colleagues and create ownership of the activities through collaborative learning.

(vii) Development of CtC applications

As is observed in section 7.4.3, Mumba developed various applications of the CtC approach in his teaching. The CtC approach has various dimensions and this allows users to interpret it in different ways. For example, Mumba's applications of the approach in his class are original and developmental. His experiences have proved that the CtC approach "is now recognised as a mean of improving the quality of education in general" (Tay 1989, p.143).

7.7 Constraints for scaling up the CtC programme

Some interrelated constraints to scale up the CtC activities in the region are summarised in table 7.3;

Table 7.3 Summary of constraints for scaling up

Three aspects	Constraints
(1) System change	i. Change in administrations and priorities at the NGO
	ii. Bureaucratic conflicts in the scaling up process
	iii. Dependency of individual commitments rather than a system
(2) Quantitative change	i. Lack of training
	ii. Ineffectiveness of INSET workshops outside of the school
(3) Qualitative change	i. Difficulties in applying the concept in practice
	ii. Jealousy and resentments from colleagues
	iii. 'Natural death' of the programme

7.7.1 Constraints for system change

(i) Change in administrations and priorities at the ICL

After Carey left the ICL in 1989, not all the successive directors appreciated the merits of the CtC programme. Kangwa therefore had to convince them that the programme was valuable. After being convinced, the second director became supportive and even facilitated Mumbo's transfer to Kabale. Since 1992, Kangwa and Mumbo have worked for the INSET and some administrative work for the ICL. They were given an office for the programme and accommodations.

During the absence of the director in 1994, Kangwa was the acting director of the ICL. The ICL also gave more credibility to their activities as an institutional rather than individual initiative. However, the third director arrived in 1995 did not approve the programme and the ICL stopped its financial support for the workshops. It was therefore Kangwa's commitment that continued the programme and achieved the support from the ICL after 1990. In general, a small initiative lead by an NGO is valuable to facilitate such change in administration and priorities.

(ii) Bureaucratic conflicts in the scaling up process

Carey recalls difficulties in scaling up innovation from a regional small initiative to the national programme in 1985.

“When innovation is transferred to a national level, it becomes bureaucratised with a large expenditure. It involves access to funds, vehicles and new positions. There were institutional and personal jealousies and competitions between MOE and MOH over who would be controlling this CtC programme. It became unpleasant all together and again people who had been most involved did not appear in the discussions” (Carey, interview on 2/11/1998).

Such conflicts and misuse of power over resources such as cars are often observed in Zambia. Especially misuse of cars by educational officers with higher statuses is common. In Mpika, Kangwa recalls the conflicts over a car as follows;

“In 1993 UNICEF donated a Suzuki jeep for the CtC programme, then many people became interested in the programme. The quarrel started over the car” (Kangwa, interview on 14/11/1998).

Although Suzuki stayed in the ICL, the DEO often uses it for other purposes.

(iii) Dependency of individual commitments and the lack of capacity in the education system

The CtC activities in the schools depend on individual teachers' commitment and creativity, not on the system. The impact of the programme vary not “only from school to school but even from time to time, depending on individuals responsible for its operation at any given time” (Chiwela 1996, p.7).

Kangwa explains the lack of capacity in the Zambian education system.

“If the programme is funded, the province and the district officers would say this is a programme. If it is not funded, it does not exist, as far as they are concerned. CtC was not funded [in schools by the MOE] so it was no existence”(Kangwa, interview on 14/11/1998).

Although the CtC programme was launched in 1986, the lack of capacity in the education system meant it could not deliver this information to the regional educational offices. Kangwa had to explain to PEO and DEOs in the Northern Province that CtC was a national programme. As late as the end of 1991, DEO in Mpika thought that CtC was a church programme. This poor communication inside the educational system and lack of ownership of the programme among local educational officers deteriorated its

implementation. Also the CtC district co-ordinators were appointed in 1994 by the MOE, however, there has been virtually no supporting and monitoring system (Mumbo interviewed on 27/11/1998).

7.7.2 Constraints for quantitative change

(i) Lack of training

The ICL basically supported most of the training in Mpika. Nationally UNICEF has provided most of fund for training workshops for CtC co-ordinators of provincial, district and school levels in Zambia, and this budget came through the CtC Directorate in Lusaka. However, there were only a few UNICEF funded workshops in each district and consequently, most teachers received little benefit from the workshops.

(ii) Ineffectiveness of INSET workshops outside of the school

The workshops held at the ICL invited only a few teachers from each of 10-30 different schools. There are at least three main problems of such workshops. First, if the participants do not share the knowledge with their colleagues, their schools cannot benefit from the workshop. Second, these participants become in charge and other staff members do not feel responsible for implementing it. Third, there is a risk of distortion of the information.

One innovative teacher who participated in the ICL workshops expressed his difficulty in the school as follows,

“If you have a bath of cold water and a cup of hot water, and if you add a cup of hot water to the bath, do you expect the cold water become hot or the hot water become cold?” (Carey, interviewed on 2/11/1998)

It is a false expectation that these INSET participants would immediately understand and internalise the new concept. Moreover, it is unrealistic to assume that those participants would instantly apply the new concept in practice as well as transfer the information to their colleagues. Teachers such as Kangwa and Mumba are rather exceptional and the majority of teachers need constant support and feedback.

As is discussed in section 7.6, school-based workshops involving all the staff members are more effective than workshops described above. In this way, 'a bath with full of cold water' is warmed up all together and evenly.

7.7.3 Constraints for qualitative change

(i) Difficulties in applying the concept into practice

Many teachers understood CtC as an approach to health education and children helping each other. Consequently in most schools CtC committees and 'CtC spear heading groups' exist. The CtC 'spearheading group' is like a CtC club but is meant to 'spearhead' the CtC activities in the school. However, only a small proportion of the pupils is actively involved. For example, typically about 40 out of 1000 children in a school make poems and perform dramas on health in front of others at the assemblies and the remainders do not actively participate in any activity.

Moreover, even enthusiastic teachers like Mumba and Mulenga took sometime to understand the concept and to apply it in practice. The CtC approach has different aspects and there is no blue print of applications. In addition, as Mumba and Mumbo described the way he was teaching in section 7-2-3 and 7-2-4, teachers in Zambia are not familiar with 'democracy' or 'children's rights', as they were not respected while they were children themselves. However, applying the CtC approach requires teachers to change their attitudes and perceptions towards children, which takes time.

This is one of the reasons why CtC has been interpreted and/or practised as club activities. As long as it stays as a club, such attitudinal change is not required and therefore, teachers are not challenged by the approach.

(ii) Jealousy and resentments from colleagues

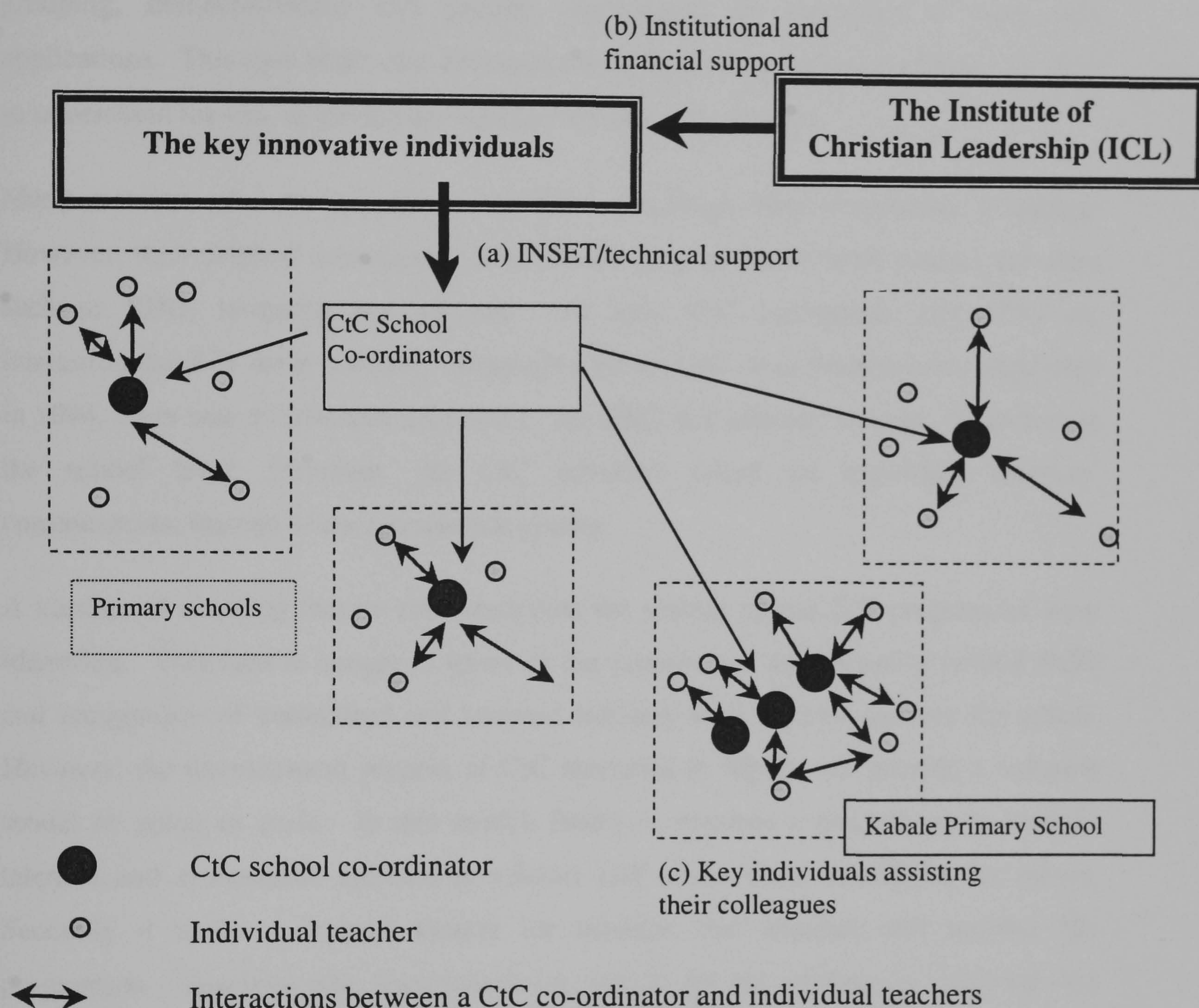
There were destructive competitions and jealousies among teachers and inspectors over participating workshops. These created difficulties in implementing the CtC programme. In the schools, there were many teachers who wanted to attend the training. People who were left out were resentful of those participating. This caused difficulties for the participants in transferring the knowledge to their colleagues (Carey interviewed on 2/11/1998).

(iii) 'Natural death' of the programme

Many teachers who attended the CtC workshops at the ICL feel that the CtC programme was over, as there was no follow up or monitoring from the ICL or the MOE. Despite the frequent workshops in 5 districts, many schools became less active in carrying on activities. Some teachers and educational officers in districts used the words 'natural death' of the programme. Since most teachers are working with hard conditions and often in very remote areas, it is difficult to keep their motivations to do something extra without constant encouragement, support and monitoring from outside.

7.8 Summary of case study 1

Figure 7.2 Summary of case study 1



Case study 1

Fr. Carry and Sr. Vincent started introducing the CtC approach in Northern Province in 1981. Subsequently, they established the ICL, an NGO under Mbala Diocese, based in Mpika in 1985. Since 1989, Kangwa, a local innovative teacher, took over to provide the workshops until 1994 when ICL stopped funding. Kangwa, Mumba and Mumbo created a critical mass of resource teachers and influenced their colleagues in Kabale through personal interactions.

- (a) Key individuals provided INSET training workshops to local teachers
- (b) The ICL provided financial and institutional assistance between 1986 and 1994.
- (c) Innovative teachers supported their colleagues to apply the CtC approach in the classrooms through personal interactions.

7.9 Conclusion

The continuity of the workshops in Northern Province was due to Kangwa, Mumbo and Mumba's personal commitments rather than the institutional policy of the ICL. These innovative teachers created a critical mass in Kabale and the region. They supported each other and developed the CtC applications in the classrooms further. Mumba's grouping, democratisation and growth monitoring are examples of such CtC applications. This case study also demonstrated that even committed teachers take time to understand the CtC approach and need a trial and error process.

Many teachers who participated in the ICL workshops have transferred or retired. However, their original schools still continue the programme through various activities such as SHG, twinning and surveys. At least CtC committees and SHG are institutionalised in these schools. Although District CtC co-ordinators were appointed in 1994, there was no resource provided to the DEO and primary schools. Therefore at the school level, therefore, the CtC activities relied on individual teachers' commitments, instead of the educational system.

A number of enabling factors and constraints for scaling up the CtC programme were identified. This case is unique in terms of the presence of an externally funded NGO and recognition of committed and talented teachers who became trainers for others. However, the development process of CtC activities in Mpika can provide a valuable model of going to scale. In this model, firstly, it requires a mechanism to identify talented and enthusiastic teachers in schools and utilise them as trainers for others. Secondly it needs a support system for teachers that expands and sustains the programme. Teachers also need incentives, which are not necessarily financial, but better performance and health of their students and recognition and appreciation from educational officials and parents.

The majority of teachers are not so innovative and therefore need more support in changing their teaching methods. This raises some questions;

- When would teachers move the stages from passive participants of workshops to spontaneous implementers and even to resource people?
- Would they ever move from one stage to another with certain conditions?
- What sort of support and system are needed for them to continue the CtC activities?

Chapter 8 Case study 2: 'A teacher training college supporting primary schools', Livingstone, Southern Province

8.1 Introduction

This chapter examines a second case study of scaling up the Zambian CtC programme, in which a teacher training college (TTC) supported neighbouring primary schools to implement the programme.

This chapter initially reviews how the CtC approach was introduced to the 13 TTCs in Zambia. Subsequently it discusses three key lecturers' roles in the DLTTTC through a case history method. This is followed by an examination of how the 5 associate schools of the DLTTTC worked on the CtC programme. It also discusses how the college has supported the neighbouring 'compounds' as part of their CtC activities. In Zambia, slums and impoverished areas are referred to as 'compounds'. In addition to the schools associated to the DLTTTC, some other schools started the CtC activities in the region. Two such schools will be described and examined to identify why they became active. From the examinations and observations in these previous sections, it identifies some enabling factors and constraints, which affect scaling up the CtC programme in this case study.

8.2 The Teacher Education Project

8.2.1 Launching seminar

The CtC programme was introduced to TTCs as part of the Teacher Education Project funded by UNICEF in 1988. The Ministry of Education, in consultation with UNICEF and the CtC Trust, organised the project-launching seminar in Lusaka. Principals from most of the TTCs attended this seminar. Initially the project introduced the CtC approach to 6 TTCs in 1988 ; Charles Lwanga, Kitwe, Kasama, Mongu, the national in-service college at Chalimbana and Lusaka College for people with special needs. In 1989, the remaining 7 TTCs including the David Livingstone TTC (DLTTTC) also started the CtC programme (Hawes, Botani, Hanbury, & Scotchmer 1992, p.39).

There were two main expectations from using TTCs. Firstly, there would be a multiplication effect with the graduates from the TTCs carrying the CtC concept and

starting the CtC activities in their primary schools. Secondly, each TTC was supposed to have five associate primary schools nearby to support the programme as pilots. Then gradually other primary schools would see these pilots and opt in to the programme.

8.2.2 List of competencies in health education

In December 1989, the follow up seminar under the Teacher Education Project took place in Lusaka and participants included TTCs and representatives of the CtC Trust in London. The main outcome of the seminar was a “list of competencies in health education” for school graduates in Zambia. These “competencies” are identified under 7 themes;

- i. Child growth and development
- ii. Nutrition
- iii. Hygiene
- iv. Safe life styles
- v. Safety
- vi. Disability
- vii. Prevention and cure of diseases

In addition, the Canadian International Development Agency (CIDA) agreed to finance a six-week course on health education for TTC lecturers in the following year.

In 1990, CIDA supported 15 female home economics lecturers of TTCs to participate in a six-week course in Hallow, UK on health education using the CtC approach (Hawes, Botani, Hanbury, & Scotchmer 1992). During the course, they developed the “list of competencies” further into “Draft Health Education Curriculum for Zambian Teacher Training Colleges” (GRZ 1990). This document identifies “the minimum health competencies” that “all teachers in Zambia have a right to know and a duty to pass on to others” (GRZ 1990, p.5).

Since Home Economics was not a compulsory examination subject, the large majority of students could not learn from these lecturers. Thus the task of the home economics lecturers was to promote the approach among their colleagues and to use it for integrating health education across the curriculum (Chiwela 1996). Following up these activities,

subsequent training was held at the DLTTC in December 1990 and similar training seminars were held during 1991 as well (Hawes, Bonati, Hanbury & Scotchmer 1992).

The introduction of the CtC approach in TTCs, therefore, involved two separate aspects. The first aspect was the approach itself that links knowledge with enquiry, especially on health and environment. Secondly it was to introduce the “minimum health competencies” into different subjects. Most colleges tried to introduce these into particular subjects, however, an already overloaded timetable made this difficult to implement.

8.2.3 Variety of CtC activities in TTCs

The CtC activities varied considerably between colleges. For example, students in Mongu TTC combined another health-related programme, Water and Sanitation, Health Education (WASHE) with CtC activities. In 1993, Mufulia TTC in Copperbelt Province implemented “health across curriculum” actively and most students in the college had a good understanding of CtC as an approach (Gibbs 1993). Ms. Milambo, who attended the CtC course in UK in 1990, is still the CtC co-ordinator in Mufulia (Milambo, interview on 23/2/1998). She has continued organising the spearheading group (SHG) in the college. The students in a SHG in the college visit primary schools nearby. However, according to the district CtC co-ordinator (Milambo) there, the college became inactive over the period. Charles Luwanga TTC in Southern Province is supporting primary schools with implementing CtC activities through college students interaction during their practical training.

By 1995, many of the TTCs’ involvement with the CtC programme had deteriorated. This was partially as a result of funding for the programme from UNICEF being stopped and trained lecturers being transferred or losing their motivation. Similar to the situation in primary schools described in Chapter 7, the colleges’ CtC activities depended on individual lecturers’ commitments, rather than on the system. In general, this can be attributed to the educational structure not being able to provide constant support to the lecturers, nor help the colleges create institutional memory. However, the DLTTC still remained active in carrying out the CtC programme.

8.3 Background to the David Livingstone Teacher Training College

Livingstone is about 300 Km South-West of Lusaka on the border with Zimbabwe and it is the closest town to the Victoria Falls. The David Livingstone Teacher Training College (DLTTC) was established in 1959. It runs a two-year primary teacher training course. From the time the college adopted the CtC programme in 1989, all principals have been supportive to the programme.

The DLTTC has been active in promoting not only the CtC programme, but also income generating activities. It has developed orchards, fish ponds, agricultural fields and industrial arts workshops inside the college. All the students are given plots of land and are required to plant crops and learn practical farming skills as part of their training course. There are a number of student committees addressing issues such as CtC, Girl child, Street children Poultry, Fishponds, Garden and Preventive maintenance. All the students belong to one or more of these committees. All staff members are also involved with supervising these committees. Two afternoons per week are designated to carry out committee activities. CtC is, therefore, part of college activities and recognised by all the staff and students.

Every year, the first year students receive an orientation seminar of the CtC programme. Overall, the DLTTC has conducted CtC activities in a comprehensive way not only inside the college but also in the surrounding communities. Three key people have actively implemented the programme. Their case histories are discussed in following section.

8.4 Case histories of three key people driving the CtC programme

In the DLTTC, three lecturers who have played important roles in promoting the CtC programme have been identified:

- Ms. Ida Kasaro (Provincial CtC Co-ordinator in Southern Province and former home economics lecturer in the DLTTC)
- Mr. Christopher Syamwenya (CtC co-ordinator at the DLTTC)
- Ms. Martha M'zumara (Girls Education co-ordinator)

The main questions asked in the interviews were listed in Chapter 5.

8.4.1 Ms. Ida Kasaro

(i) Personal background

She started teaching in 1963 in Eastern Province for six years. Then she took further training at the DLTTTC in home economics. She taught home economics at a secondary school for 6 years then joined Chipata TTC as a lecturer. In 1983, she came to the DLTTTC as a home economics lecturer.

(ii) The introduction of the CtC approach

The principal of the DLTTTC had attended the National CtC Seminar and on his return, he explained the concept to his staff. Ms Kasaro found the CtC concept difficult to grasp, initially understanding that CtC was a club rather than an approach. In 1990, because of her specialist subject, she participated in a six-week training course based in UK. Thereafter, she fully understood the concept and became motivated to promote the programme.

(iii) Involvement with the CtC programme

i. Participation in the CtC workshop in UK and organisation of the orientation workshop in the DLTTTC

On her return from the six-week training course in the UK, Ms Kasaro organised an orientation workshop for all the staff members. She taught her colleagues that CtC was not just a club, rather it was an approach to enhance education and health.

ii. Support for associate schools

The DLTTTC had associated itself with 5 nearby schools to pilot the CtC approach. Ms Kasaro and other CtC committee members provided a number of workshops for CtC school co-ordinators from the associate schools. However, the out-of-school CtC workshops for school CtC co-ordinators gave the impression to other school teachers that CtC was in fact a club. Consequently, when the co-ordinators had difficulties in passing the knowledge to their colleagues, who had little interest in participating in a club.

“We should have involved all the staff members, as the CtC concerns all the children and all the teachers. If we had involved all, then at least, they did not think it was a club. Even in the college, some lecturers thought it was a club, so they were nothing to with it” (Kasaro interviewed on 19/11/1998)

iii. Working as the CtC provincial co-ordinator

In 1994, Kasaro was promoted to Inspector of home economics at the PEO for the Southern Province as well being appointed as the CtC provincial co-ordinator. In the same year, the CtC national committee decided to introduce the programme to the whole province. With the support of the Provincial Education Office, Kasaro organised the CtC seminar at Charles Luwanga TTC for all 9 district school inspectors, who were appointed as the CtC district co-ordinators. This was a cascade approach to training, as these inspectors were similarly expected to organise seminars for CtC zone co-ordinators.

“But when they went back to the districts, very few managed to teach the CtC concept correctly to the teachers” (Kasaro interviewed on 19/11/1998)

Then zone co-ordinators were supposed to spread the CtC concept to teachers. However, the zone co-ordinators were not given any fund to have seminars for teachers. As a result, many schools received little information on the programme. While Kasaro visited schools as the inspector, she observed that the head teachers’ understandings of the CtC programme indicated the quality of activities taking place in the schools. For example, if the head could not explain what was happening with the programme, then nothing was happening. On the other hand, some enthusiastic head teachers were fully aware of the school activities and in such schools, a large proportion of teachers and students were involved with the programme.

8.4.2 Mr. Christopher Syamwenya

(i) Personal background

Syamwenya became a primary school teacher in Livingstone in 1978. In the early 1980’s, FINNIDA, the Finnish aid organisation, started an Industrial Arts Teaching Project which introduced industrial arts and distributed tools to primary schools. Although most of the schools did not use the tools, Syamwenya started using them for teaching. FINNIDA recognised his work and supported his further training on industrial arts in Lusaka in 1983. He worked as a district and then provincial co-ordinator for this project between 1985 and 1990. During this period, he ran some workshops on introducing industrial arts to primary teachers. He had a further training as a co-ordinator in Luwansha, Copperbelt in 1988. In 1990 when the FINNIDA’s funding ended, he became a full time lecturer at the DLTTTC.

Through his experiences of working with an external donor as a co-ordinator, he learnt how to work with and introduce new concepts to teachers. This exposure to the process of change prepared him for work with the CtC programme.

“I value new ideas and instrument for change. You can make a difference in some ways in the life conditions yourself. Because of this Finnish project and working with people all the time, I learnt accepting the change positively. I am not conservative. But for others, sometimes it is difficult to accept the change and new concepts”(Syamwenya interview on 13/5/1998).

(ii) The introduction to the CtC approach

In 1989, the DLTTTC started the CtC programme and Mr. Kabalesha, a science lecturer became the first CtC chairperson. He was very active and Syamwenya learnt about the CtC concept through him.

Syamwenya's children were studying at one of the associate schools. He saw his elder children in school started teaching what they learnt to the younger ones. This prepared the younger ones to go to school as they could get the information freely from the elder ones. His children also started putting rubbish away and making the home environment cleaner and healthier. He was impressed by the children starting to take initiatives. This convinced him that the CtC programme works well (Syamwenya interview on 13/5/1998).

(iii) Involvement with the CtC programme

i. Support for 5 associate schools

Syamwenya joined the CtC committee as Vice-chairperson in early 1992. In October 1992, he became the CtC Chairperson as Kabalesha was promoted to a senior inspector. To date, Syamwenya remains an active CtC co-ordinator both in the college and in the community.

With financial support from UNICEF, Syamwenya, Kasaro and other CtC committee members organised some seminars for associate schools in 1992 and 93, both for teachers and parents. Also the CtC committee organised fund-raising for the CtC programme such as a desk rehabilitation project and beef selling events in the college.

ii. Establishment of a community school under the CtC programme

The CtC committee in collaboration with Street children and Girl child committees started a community school for 36 children at the college in 1993. The idea behind this was child survival. The college also provided some meals to children from the college garden for two years. In 1998, there were 71 children studying at the community school.

As his work was recognised by UNICEF, Syamwenya was appointed as a focal point of community schools in the Province. He continues working with the CtC committee in the DLTTTC and now tries to introduce CtC to community schools in the region.

iii. **Gender education**

From 1994, Syamwenya and M'zumara started working more within the college. He organised seminars to introduce the CtC approach to all the students. Also students in the CtC committee started visiting neighbouring primary schools to demonstrate the CtC lessons and activities to teachers.

In October 1995, M'zumara and Syamwenya attended a UNICEF funded workshop on gender across curriculum with other three colleagues. Then M'zumara and Syamwenya conducted a pilot course in 1996 for 30 students every Wednesday over three months. These students were from the CtC committee and they regarded gender issues as part of health and therefore the CtC programme. This will be discussed in section 8.7.

8.4.3 Ms. Martha M'zumara

(i) Personal background

M'zumara had specialised as a home economics teacher and taught in secondary schools. She joined the DLTTTC in 1990. She was interested in helping disadvantage people while at school and she belonged to a church organisation that helped old and disadvantaged people in the community. She describes her feeling towards disadvantaged children.

“I feel so bad to see children who are disadvantaged. I was not born in that situation, as my father was a teacher and he looked after us well. But I used to see my friends who could not go to school, I used to feel bad about it. Realising what is happening in the society today and how girl children are treated, I thought I should do something about them.

Sometimes I feel like crying when I see children who come to school with torn clothes. They have not eaten anything. They want to learn but they cannot, because parents cannot afford enough food. But once they are educated, they can look after themselves” (M'zumara interviewed on 18/11/1998).

Her sympathy towards disadvantaged children made her work hard for children from 'compounds'.

(ii) The introduction of the CtC approach

M'zumara was in the same department as Kasaro and together they started using the CtC approach in their teaching. Health education was part of the home economics syllabus and M'zumara applied the CtC approach in her teaching.

(iii) Involvement with the CtC programme

i. Girls' Child Committee and community school

In 1994, she was the Chairperson of the Girl Child Committee in the college, which was a branch of the CtC committee. M'zumara, Syamwenya and other committee members started a community school, which had separate classes for girls and street children. In recent years, all the children have been taught in one class. M'zumara was teaching health education and crafts.

M'zumara and Syamwenya facilitated two compounds to organise community school committees among parents. Although it took a few years, parents from both compounds have started building community schools.

ii. Gender education curriculum

From 1995, working with Syamwenya, M'zumara developed the gender education curriculum for TTCs. They were also involved with college based workshops as resource people in 1998. This is described in section 8-6.

This section discussed the roles and involvement of individual key people in implementing the CtC programme in the region. Their commitments and creativity made the programme multi-dimensional and comprehensive both in and outside of the college. The following section examines how the five associate schools are currently implementing the CtC programme. Since the DLTC's support stopped in 1994, their current activities indicate the sustainability of the programme.

8.5 Five associate schools near the DLTTC

As is described in the former section, in 1989, the DLTTC selected 5 associate schools that were nearby the college. The criterion for the selection was that the schools had active head teachers and co-operative staff members. The schools selected were Mujala, Nansanzu, Shanalumba, Namatama and Dambwa Central primary schools. All the head teachers came to the college for the first meeting on 16 June 1989 to receive an orientation seminar. Between 1990 and 1993, The DLTTC supported these 5 schools through workshops. UNICEF provided funds for workshops and monitoring for associate schools.

In 1994, the MOE introduced CtC to the rest of the primary schools in the Southern Province. The Southern Province organised the regional CtC seminar at Charles Lwanga TTC for nine CtC district co-ordinators and district school inspectors. Also the DLTTC stopped receiving financial assistance from UNICEF to support the associate schools in 1994. The college felt its role for associate schools was over and so stopped visiting them (Syamwenya interviewed on 13/5/98).

In March 1998, I visited the 5 associate schools with Syamwenya (the CtC Chairperson and a lecturer at the DLTTC), Kasaro (the CtC Provincial co-ordinator, Inspector of Home Economics) and Sakala (District Inspector of Schools) to examine the current CtC activities. The objective was to understand the impact of the DLTTC's workshops on scaling up the programme in primary schools. Since the support from the college stopped in 1994, it studies how and whether these associate schools are currently implementing the programme. It also examines the sustainability of the programme.

8.5.1 CtC activities in five associate schools

The following table 8.1 summarises current CtC activities in the five associate schools.

Table 8.1 Current CtC activities in five schools associated to a leading teacher training college

	No. of students enrolled in school	CtC committee	CtC spearheading group	Performance at assemblies	Other clubs working together	Twinning of children	CtC programme became less active
(A) Mujala, Demonstration School	761	✓	✓	✓	✓	✓	
(B)Shanalumb a Basic School	894	✓	✓	✓	✓	✓	✓
(C)Namatama Basic School	1146	✓	✓	✓		✓	✓
(D) Nansanzu, Basic School	1432	✓	✓	✓			✓
(E) Dambwa Basic School	1865	✓	✓	✓		✓	
No. of Schools		5	5	5	2	4	3

All the 5 associate schools are still carrying out various CtC school activities. All the five schools have CtC committees and spearheading groups (SHG). The most common activities in the schools are SHG children presenting poems and sketches at the assemblies and ‘twinning’ of the children. In two schools, other clubs such as Anti-AIDS, Anti-Drugs and choir work together with the CtC SHG to promote health.

Generally ‘twinning children’ means coupling children either within the same grade or within different grades, and intends to involve all the children in school. Children call the child they are coupled with as ‘twin sister’ or ‘twin brother’. ‘Twinning’ was observed in four associate schools out of five. For example, in Mujala School, most students are ‘twinned’ with another one in their same classes. Many children expressed that they were happy to work with each other. They help each other, not only with health, but also on academic subjects. Shamalumbe School has started ‘twinning’ through pairing younger children with elder ones. Grade 1 children are twinned with Grade 9, for example. Namatama Basic School established a supporting system among different grades, such as Grade 7 helps Grade 1, Grade 6 helps Grade 2 and so on. It is not twinning individual students but twinning classes.

In three schools, the CtC committee members expressed that the CtC programme became less active than the time when the DLTTTC provided training workshops. Many teachers expressed that difficulties were encountered in trying to continue the activities without any workshop or support from outside. For example, in Nansanzu School, Ms. Akayombokwa, the CtC Chairperson, had been attending all the seminars held at the DLTTTC and she had been very active (Syamwenya interviewed on 20/3/1998). However in later years, she became tired of the fact that her colleagues thought CtC activities were solely her responsibility. She and other committee members lost their enthusiasm as there was no acknowledgement or encouragement from their colleagues or from outside of the school (Akayombokwa, interviewed on 20/3/1998). Especially after the DLTTTC stopped their seminars to associate schools in 1994, the activities deteriorated. This is a typical problem, which trained teachers faced in their schools in all case studies.

8.5.2 Twinning of associate schools and other schools

The DLTTTC introduced a concept of ‘twinning schools’ to associate schools in 1992. ‘Twinning schools’ means that each associate school would choose one school nearby as a ‘twin’ to introduce to the CtC programme. It was expected that the five associate schools support five twin schools and then more primary schools would opt in to the programme. There was therefore a clear intention of scaling up the CtC programme among primary schools.

The DLTTTC CtC committee raised some funds for the CtC programme through a desk-making project and provided K.20, 000 each associate school. Each school was expected to start tuck shops or a small industry using this fund from the college to cover initial costs. After raising another K20, 000, these associate schools were expected to give it to their twin schools.

However only Shamalumbe School could raise another K20, 000 through uniform making in the school. Others run out of the funds In Nansanzu, when it received K20; 000 in 1992, the head teacher at that time put it into the general-purpose fund, so CtC committee could not use it for fund raising. None of the associate schools actually gave K20, 000 to their ‘twins’.

Moreover, there was little communication between associate and ‘twinned’ schools. For example, the CtC committee members of Shamalumbe visited their ‘twin’ school just once in 1994, despite the fact that ‘twin’ school was one block away from Shamalumbe.

The reason was not clearly mentioned. Namatama CtC committee members visited their 'twin school' 3 times per term, however, the frequency reduced with time. As a result, 'twinning' of schools did not work and the CtC programme did not scale up from the associate schools. It may be possible that in the declining economy, the associate schools were reluctant to provide the expected financial support to their twin schools and were therefore unmotivated to communicate with their respective twin school.

8.6 Community school as part of the CtC programme

The CtC committee in the DLTTTC has established a community school within the college for the children in neighbouring 'compounds'. The college administration was fully supportive of this community school. Only the DLTTTC among TTCs in Zambia has started such an activity and this is indicative of the enthusiasm and commitment of the college staff to helping the neighbouring communities.

There are two 'compounds' nearby the DLTTTC, namely, Mwandi and Nakatindi. Children in these areas did not have access to basic education. In 1993, the DLTTTC CtC committee established a community school, and students in the CtC committee started teaching there. The college even provided one or two meals a day to children in the community school for a year. However, the college could not continue this feeding scheme for financial reasons. Gradually the CtC students realised that as long as the community school was in the college, people in the compounds would not have ownership of or responsibility for the school. Syamwenya and the college students, therefore, facilitated residents of the compounds to establish their own community schools.

In Nakatindi, it has been difficult for the people to organise a committee to establish a community school. In Mwandi compound, the community leaders and parents organised a community school committee. They started a community school in the compound with 2 novice teachers selected from within the compound and these novice-teachers received in-service training from the college as well. However since there was no salary for them, both of them left the school. The committee tried to ask the user fee of K500 per month from parents, but parents could not provide it.

In February 1998, Syamwenya, the Community School Committee members and I visited some parents in Mwandi, who had certain income generating skills such as making baskets and sweeping brushes and knitting. These parents said they did not mind

teaching others their skills, but stated that the market would not support an increased production. As soon as others start selling the same products, the competition would become high and there would be over supply.

Several lecturers in the college questioned the legitimacy of parents claims that they could not afford K500, however, since education cannot bring food immediately, it is understandable that the parents' priority is not sending their children to a community school. In the discussions with the Community School Committee in Mwandi, members expressed their need for initial funds for income generation training and assistance to find a market to sell their produce outside of the compounds. Despite all the various setbacks, a very positive fact was that the Community School Committee members have secured suitable land and started building their community school. Also the DLTTC will continue free teacher training and continue to provide the present community school in the college.

8.7 Gender education as part of the CtC programme

The DLTTC also has been involved with developing 'Girl Child Education Curriculum' with the students in the CtC committee since 1995. Syamwenya and M'zumara regard gender education as part of the CtC programme, as it promotes children's rights and self-esteem of girls (M'zumara interviewed on 14/5/1998).

The MOE with assistance from UNICEF and CIDA started the Programme for the Advancement of Girls' Education (PAGE) in 1994 in Zambia with 20 pilot schools in two provinces. In August 1995, Mwansa from UNICEF met M'zumara and Syamwenya to discuss the feasibility of them to developing a pre-service training course on 'Girl Child Education and Gender'. UNICEF and the MOE had chosen the DLTTC as it was already actively involved with CtC and Girl Child programmes.

The DLTTC with UNICEF organised a four-day workshop on Girls Education in October 1995 at the college. Five lecturers including Syamwenya and M'zumara, from the CtC committee attended this workshop.

It aimed at evolving "a course on the girl child and teacher education, to consider efforts for implementing the course as a pilot course in January 1996, and to provide direction on developing a clear plan for replicating such a course at other teachers' colleges" (Mitchell 1995, p.2).

UNICEF supported a strategy to use the existing CtC structure in the college. Dr. Claudia Mitchell from Canada and Dr. Dixon Mwansa came as UNICEF consultants to conduct the seminar. Syamwenya and M'zumara started the course using the college fund. The participants used teaching materials on gender issues sent by Mitchell from Canada. They used their own time every Wednesday from 1600 to 1900 hours and involved 30 students in the CtC committee for three months.

In April 1997, the college held a three-day seminar on gender across curriculum for all the lecturers, funded by UNICEF. UNICEF officials acknowledged that this curriculum on gender was developed at the grass-root level in the DLTTTC and praised the college's initiative.

Because of this contribution, Syamwenya and M'zumara conducted college based workshops to introduce PAGE to five TTCs as resource people in 1998. They visited the five colleges and involved all the staff members in the workshops. Their focal points were lecturers involved with the CtC programme as the colleges could add an aspect of girls' education to their existing CtC activities. Currently PAGE is one of the most visible educational programmes at the school level. In fact during my stay in Zambia between January and June 1998, many primary school children in CtC spearheading groups cited poems and performed dramas related to girls' education. Syamwenya described that "through PAGE, hopefully the Child-to-Child programme will be revitalised"(interviewed on 13 May 1998).

This is an example that the CtC programme in Zambia is permeating into different educational programmes such as PAGE. It is scaling up by adding other layers and aspects into the CtC programme.

8.8 Primary schools taking own initiatives

Some primary schools in Southern Province were neither associate schools nor twin schools but are presently active in implementing the CtC activities in their schools. This section describes two such schools and examines why they became active in the programme.

8.8.1 Nalituwe Basic School (Livingstone District)

(45 Teachers: 34 women; 11 men, Students: 736 girls; 696 boys, Total 1432)

In Nalituwe Basic School, Mr. Mutukwa, the head teacher, claimed that all the staff members and students were involved with the CtC programme. Although this school did not receive any seminar on CtC, Mutukwa became interested in the concept when he overheard of it from the school inspector and learnt more about it from Kasaro and Syamwenya. He has been a primary school teacher for last 30 years and joined Nalituwe in 1992. He makes students call him 'Uncle', since he believes children normally fear him when they call him 'Head teacher' or 'Sir' (Mutukwa interview on 19/3/1998). Overall individual teachers were in charge of a variety of school activities and there is a clear division of tasks.

Nalituwe introduced 'twinning' among all the students a few years ago. For example, each Grade 1 pupil is twinned with a student in Grade 8. Basically the older children look after the younger ones both health and academic aspects. When I visited the school, around 40 pairs of children explained how the twinning worked. A girl from Grade 8 checks her 'twin daughter' in Grade 1 every morning to find whether her 'twin daughter' is clean and her hair is combed. She also asks whether her 'twin daughter' is hungry. In the break time, she helps her 'twin daughter' reading and mathematics. If her 'twin daughter' is absent, she visits her home and makes sure she is all right. If twins live nearby, they come to school together so that road safety is taught on the way to school. Mr. Mutukwa explains that elder children benefit through teaching the younger ones as they revise what they learnt before. They also learn a sense of responsibility (Mutukwa interviewed on 19/3/1998).

It is important to have a mentor in school in their age as AIDS orphans are steadily increasing and children are facing an increased number of family problems. Many of them live with their relatives and stepparents who are not necessarily the best caretakers. Some of them are badly abused. Twinning of children can help them tremendously. In this school alone, there were 40 orphans in 1997 (Mutukwa interviewed on 19/3/1998).

In Nalituwe, the responsibility of CtC activities was also well distributed among teachers. For example some are in charge of improving reading ability through twinning and some run Anti-AIDS and drug prevention activities. The school atmosphere was child-friendly and teachers seemed to be accessible to children. Outside of the building, log benches

had been placed under huge trees to provide two open-air classrooms. There is a small playground as well. Some children sat and learning together without being instructed to do so by a teacher.

Nalituwe School proves that even though teachers do not receive any direct training on the CtC approach, if the head teacher is innovative and interested in it, she or he can introduce and implement the concept in a comprehensive way.

8.8.2 Muwata Basic School (Kalomo District)

(34 Teachers, Students: 1200)

Muwata Basic School started its CtC programme in 1995 when one teacher attended a CtC seminar at the provincial level in 1995. Mr. Mwanza, who attended the seminar and became the school's CtC Co-ordinator, organised a CtC committee. The committee members are not only from the school but also from the district council, a hospital and the agricultural department in the district. He had passed the information to all his other colleagues and so all the teachers became involved with CtC activities.

The CtC committee introduced industrial arts such as tailoring, woodwork and leather craft as part of survival skills for income generation. This is because the committee recognised that poverty is affecting children's health most. The committee members and children also visit farmers near the school to learn practical farming skills as well as commercial agriculture. In addition, this school is situated in the middle of a large poor compound and vandalism is very severe. CtC spearheading group children therefore go to the market in the compound and sensitise the community through sketches. The children create sketches and poems on their own. Many are about AIDS and girl-child education.

8.9 Enabling factors of scaling up the CtC programme

From this case study, some of the interrelated enabling factors to scale up the CtC activities are summarised in Table 8.2;

Table 8.2 Summary of enabling factors which facilitated scaling up

Three aspects	Enabling factors
(1) System change	i. The central government’s approval
	ii. Development of the health education curriculum
	iii. Access to external funding and training
	iv. Fund raising for CtC activities inside the teacher training college
(2) Quantitative change	i. Training workshops at the college for associate schools
	ii. Supportive head and administration, district and provincial co-ordinators
	iii. Development of CtC applications for community schools and gender education
(3) Qualitative change	i. A long term commitments and enthusiasm of individuals
	ii. Identification of committed teachers as resource persons in the workshops
	iii. College based workshops

8.9.1 Enabling factors for system change

(i) The central government’s approval

As the CtC programme was introduced as a government programme to all the TTCs, the CtC committee was organised and principals and some lecturers were invited to the national seminar. This gave the programme legitimacy in the college and also in associate schools.

(ii) The development of a health education curriculum

“The draft health education curriculum for Zambian teacher training colleges” (1990) was prepared by home economics lecturers during a training course in UK. Although this was not published as an official paper, it gave some guidelines to lecturers in TTCs.

(iii) Access to external funding and training

Funds for training workshops for college lecturers and associate schools were mainly from UNICEF and CIDA. Also Kasaro, the home economics lecturer who participated

in the CtC training course in UK organised a workshop for all the staff members in the college.

(iv) Financial resources provided by the college for the CtC programme

Because of the variety of income generating activities in the college and strong support from head and vice principals, the DLTTC has been providing resources to the CtC programme. For example, the college provided supplemental meals to children in the community school. Also Syamwenya and Kasaro organised meat-selling events to raise funds for the CtC programme. Moreover, while M'zumara and Syamwenya organised a pilot course for gender education in 1996 and the college covered all the expense. Such internally generated resources are more sustainable than donors provided ones. However, this is an exceptional case.

8.9.2 Enabling factors for quantitative change

(i) Training workshops at the college for associate schools

All the five associate schools continued the programme in 1998 despite the termination of the DLTTC's workshops in 1994. Although three of these schools claimed their programme became less active after 1994, at least the CtC committees and SHGs were institutionalised. Also Mujara school collaborates with the community school in the college and accepts children from the 'compounds without charging the school fees.

(ii) Supportive head and administration, district and provincial co-ordinators

The DLTTC's head and vice principals have been supportive to the CtC programme from the time it was introduced in 1989. For example, they agreed to use the college lecture rooms as the community school and to provide meals to the children studying there. Also while M'zumara and Syamwenya were conducting the pilot course during their own time in the evenings, the head and vice principals came and observed the course, which encouraged M'zumara and Syamwenya enormously (Syamwenya interview on 18/3/1998).

(iii) Development of CtC applications for community schools and gender education

The DLTTC is working together with residents of compounds through CtC activities and community schools. Involving community schools is another channel to scale up the CtC programme. Moreover, the DLTTC's CtC programme also includes gender education. As is discussed in section 3-9, Chapter 3, this is described as an 'additive strategy' which adds "additional sectoral activities to existing programmes" (Edwards and Hulme 1992, p.19).

8.9.3 Enabling factors for qualitative change

(i) Long term commitment and enthusiasm of individuals

Kasaro, Syamwenya, M'zumara and innovative teachers such as Mutukwa in Nalituwe School have held a long-term commitment to quality education and, therefore are committed to long term use of the CtC approach.

(ii) Identification of committed teachers as resource persons in the workshops

UNICEF recognised the innovative activities of Syamwenya and M'zumara, and therefore, asked them to conduct college based workshops as resource people (section 8-6). As is discussed in case study 1, teachers and lecturers are more likely to be convinced by their colleagues than by expatriates or government officials.

(iii) College based workshops

Kasaro conducted a college-based workshop on CtC on her return from UK, after attending the six-week CtC course in 1991. All the staff members were oriented all together.

8.10 Constraints of scaling up the CtC activities

Table 8.3 summarises the constraints of scaling up the CtC activities.

Table 8.3 Summary of constraints for scaling up

Three aspects	Constraints
(1) System change	i. Lack of sustainability
(2) Quantitative change	i. Ineffectiveness of INSET workshops outside of the school
	ii. A model of ‘twinning’ of schools with financial assistance
(3) Qualitative change	i. Difficulties in applying the concept in practice
	ii. Jealousies and resentments from colleagues

8.10.1 Constraints for system change

(i) Lack of sustainability of the CtC programme in the associate schools

After the approach was introduced into the entire province in 1994, UNICEF stopped funding the DLTTTC to cover the cost of workshops for associate schools. Consequently, the DLTTTC stopped its assistance to associate schools and three of these associated schools then claimed to become less active. This is a common problem of sustainability of innovations after termination of the external intervention.

The model of the TTC supporting local primary schools might have been more sustainable if there was no external funds involved. On the other hand, the associate schools had received a number of workshops, teaching materials and also financial assistance from the DLTTTC between 1990 and 1993. One can argue that it was enough to institutionalise the programme in the schools. However, the way those workshops were held had a problem described in the following section.

8.10.2 Constraints for quantitative change

(i) Ineffectiveness of INSET workshops outside of the school

The workshops at the DLTTTC for associate schools only involved a few CtC school coordinators per school. As a result, other teachers had little ownership of the programme.

The problems associated with such workshops held outside of schools were discussed in section 7.7.2.

(ii) A model of ‘twinning’ of schools with financial assistance

Twinning of associate and ordinary schools did not work. This was in part due to poor communication between the schools. Expecting associate schools to generate K20 000 and give it to their twinned schools was probably too optimistic in the declining economy. Such financial obligation might have discouraged the associate schools to contact their ‘twins’. It would have been better that such funds are used as incentive to actually work with ‘twins’ and given after successful collaboration.

8.10.3 Constraints for qualitative change

(i) Difficulties in applying the CtC concept

Kasaro claimed that when she learnt about the CtC programme in 1989, it was introduced as a club. Many schoolteachers also understood that it was a club activity. While she visited schools as an inspector and explained CtC was not a club, teachers normally said that “it has been a club and why are you telling us now that it is an approach?” (Kasaro interviewed on 19/11/1998).

This is a critical point when the CtC activities at the school level are evaluated. Most schools set up CtC spear heading groups but have not used CtC as an approach in the classroom level. This was partially because CtC was a difficult concept to teach, understand and apply as a teaching and learning approach.

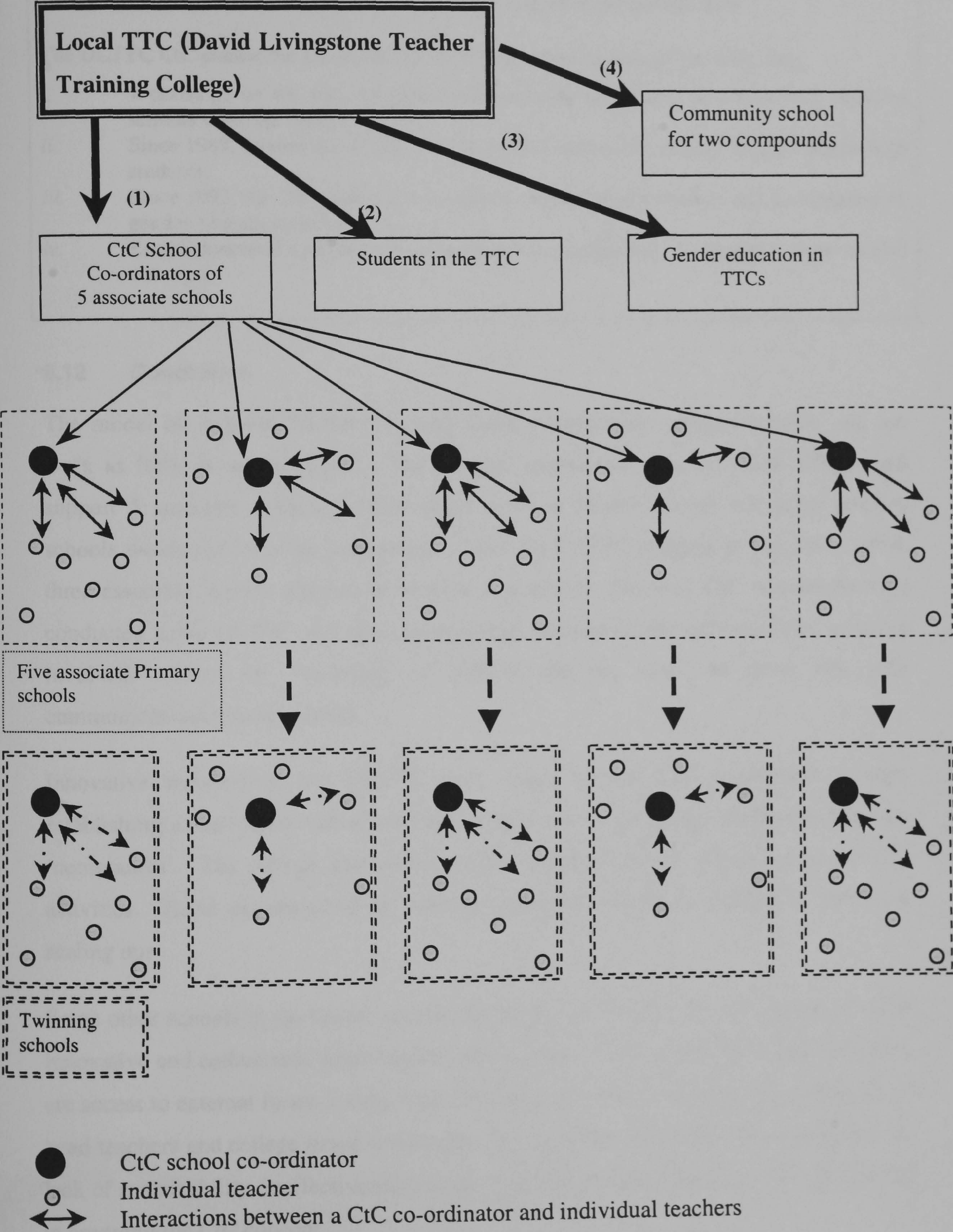
(ii) Jealousies and resentments from colleagues

As is observed in Chapter 7, committed individuals often suffer from the jealousies and receive discouragement from their colleagues. Both college lecturers and teachers in associate schools experienced these negative attitudes. While Syamwenya and M'zumara were running the gender curriculum course, they received negative comments from colleagues. Although there was no incentives involved, their colleagues did not feel comfortable to see the two working harder than themselves (M'zumara interview on 18/11/1998). Also only the CtC co-ordinators in associate schools participated in workshops at the DLTTTC, which created jealousies among their colleagues.

8.11 Summary of case study 2

The figure 8.1 summarises the main features of this case study.

Figure 8.1 Case study 2 A TTC assisting local primary schools



Case study 2

In this case study, the DLTTTC in Livingstone supported five associate primary schools to start the CtC programme through training workshops and financial assistance between 1991 and 1994. Each associate school was supposed to disseminate the information and skills to another ‘twinned’ school nearby, however, this did not happen. The college is also involved with curriculum development and training on gender education. The college organises a community school for two neighbouring compounds.

The DLTTTC CtC committee has scaled up the CtC programme through the following;

- i. Workshops on the CtC concept and monitoring subsequent activities in 5 associate schools between 1989 and 1993.
- ii. Since 1989, orientation of CtC workshops and various CtC-related activities for college students.
- iii. Since 1993, the CtC approach was used in support of girl children and development of gender education curriculum.
- iv. Establishment of a community school for two neighbouring ‘compounds’ based on CtC concepts.

8.12 Conclusion

The model of ‘a local Teacher Training College supporting primary schools’ did not work as fully as was expected. The original expectation was that each TTC would support 5 associate schools, which would serve as model schools and other primary schools would opt in to the programme. After the DLTTTC stopped its support in 1994, three associate schools claimed to become less active. The way CtC workshops were conducted at the DLTTTC was again problematic, because all the staff members were not involved. Moreover, ‘twinning’ of schools did not work, as there was little communications among schools.

Innovative lecturers in the DLTTTC have scaled up the CtC programme through establishing a community school and involving a new target group of children from the ‘compounds’. The college also added another theme of gender education on the CtC activities. These are described as ‘additive strategies’ (Edwards and Hulme 1992) for scaling up.

Some other schools in the region became active in the CtC programme because of some innovative and enthusiastic head-teachers and teachers. Main identified enabling factors are access to external funds, a long term commitments of innovative lecturers, supportive head teachers and college based workshops. Some of the main identified constraints are lack of sustainability, ineffectiveness of out-of school training workshops and difficulties in applying the CtC concept.

Chapter 9 Case study 3: A local NGO assisting CtC district co-ordinators and non-formal community schools, The Copperbelt Province

9.1 Introduction

This chapter examines the third case study of scaling up the CtC programme in Zambia, in which a local NGO is assisting CtC district and school co-ordinators in primary schools and also community schools in the Copperbelt Province. In 1986, Fr. Carey, the director of the ICL at that time, introduced the CtC approach to Copperbelt Province in collaboration with Fr. Henze the Religious Education Regional Advisor based in the provincial education office (PEO). They conducted various CtC training workshops for local teachers. The PEO and DEO chose some innovative teachers as district CtC co-ordinators in 1990.

Copperbelt Health Education Project (CHEP) was initiated by two Indian medical doctors in Kitwe, Copperbelt in 1988. Its focus has been prevention of HIV/AIDS. CHEP started promoting the CtC approach in primary schools in early the 1990s. CHEP also works with out-of-school youths using peer education. Therefore, this case study is about scaling up the CtC programme by involving various groups in addition to school children. This case study also provides an example of collaboration between the government system and a local NGO.

This chapter first reviews the programmes CHEP implements. Subsequently it identifies some key people who have contributed to the CtC programme in the Copperbelt and describes their case histories. The following section examines diversified activities using the CtC approach in the region. Finally it identifies enabling factors and challenges of going to scale.

9.2 CHEP's programmes which assist the CtC programme

CHEP's current mission statement is as follows;

“CHEP collaborates with all sectors of the community to help develop knowledge, values and life skills that enable creativity, responsibility and healthy lifestyles”(CHEP 1997).

CHEP is funded by four international donor agencies, NORAD, UNICEF, Christian Aid and Southern Africa AIDS Training Programme (SAT), which is supported by CIDA. This consortium provides financial security that enables CHEP to implement long term programmes, which are less affected by any one donors' change in priorities and funding than other NGOs funded by only one donor agency. CHEP promotes the CtC approach not only in primary schools but also in community schools. It also promotes the approach among out of school youth in compounds. CHEP has therefore applied the CtC concept to wider target groups than just primary schools. CHEP is implementing and assisting various health-related programmes. In recent years, it has particularly been working on HIV/AIDS prevention and care-takers of AIDS patients.

CHEP has expanded rapidly over the decade and it employed more than 35 full time staff members in 1998. Its programmes have also increased through various sectors and the network of partners. Walker emphasises that

“when tackling the issues of HIV/AIDS and behavioural change, it is necessary to work with different target groups” (Walker interviewed on 20/2/1998).

Some of the main programmes in which CHEP is involved with are as follows;

- School youth programmes through CtC, debates and games for life, education through sports.
- Setting up and assisting community schools using the CtC approach
- Peer education for out of school youth, especially in compounds
- Women's programmes (Commercial Sex workers and alternative income generation, agricultural project and nutrition education for antenatal mothers)
- Peer education in work places (Security forces and companies)

(CHEP 1997).

In all the programmes, peer education is the basic strategy for CHEP. Hughes-d'Aeth (1998) describes the rationale for using a peer education approach, given by four NGOs in Zambia including CHEP, as follows;

“Peer strategy enables persons at risk to be reached by their peers in a personal and sensitive manner by those who are best able to understand their contextual situation and from whom the target group can trust. Peer educators are a credible source of information to the target

population as well as being persuasive role models for change, and they are likely to influence behaviour changes which are strongly influenced by community values and beliefs” (Hughes-d’Aeth 1998, p.18).

There is an assumption that peer educators can communicate with and empathise with people from the same backgrounds better than educators alien to that background, as a result, they can be more convincing than outsiders. This view is shared by practitioners of using the CtC approach.

Among the five programmes listed above, the first three are related to the CtC programme. Thus the following three sections will examine each of these three programmes in turn.

9.2.1 Supporting the Child-to-Child programmes in primary schools

CHEP works closely to district CtC co-ordinators under the MOE. This collaboration of governmental and non-governmental organisations provides critical support to the CtC programme in the province.

CHEP has been assisting CtC district co-ordinators through training workshops and funding their activities. CHEP also conducts health-related quiz and debates at schools. Several staff members of CHEP are responsible for CtC activities and the budgets that are allocated for the CtC programme. CHEP also promotes the CtC approach in secondary schools, similarly conducting workshops for teachers.

The training seminars for CtC co-ordinators are aimed at providing further information and facilitating participants to exchange their experiences on CtC. In Chingola, Kitwe and Mufulira Districts, the district co-ordinators are committed and active. CHEP is supporting their activities through financial and technical support such as workshops on life skills. In other districts, CHEP also co-ordinates the CtC programmes. In 1997, the Copperbelt Province was divided into smaller districts and Lufwanyama, Masaiti, Mpongwe Districts were created. Until new district CtC co-ordinators are appointed, CHEP is co-ordinating CtC activities in these 3 districts.

In addition, at the school level, CHEP staff found through the quiz and drama competitions among primary schools that the children and teachers who can think and discuss issues critically are the ones that are actively involved with the CtC programme. Moreover, most schools have anti-AIDS clubs, these activities are confined as clubs, however, the CtC activities are more prevalent in the whole school. So CHEP is

working more with the CtC programme than the anti-AIDS clubs (Walker interviewed on 20/2/1998).

9.2.2 Supporting community schools in compounds

Community schools are non-formal schools mainly for children in compounds in Zambia. 660,000 children, 44% of 7-13 years old (56% rural, 23% urban) are estimated to be out of primary schools (1990 census). Community schools in compounds, therefore, are serving virtually the same role as ordinary primary schools.

In general, situations in compounds are worsening. Many compounds have no formal primary or community school. Instead, there are many bars and taverns. For example, one compound near Ndola in Copperbelt, holds 70,000 people, and there is one primary school, one community school and more than 90 bars and taverns. Malnourished children and teenage mothers can be observed throughout the compound. In contrast, many young men are to be found drinking 'chibuku', local beer during the day. The numbers of orphans and single mothers are steadily increasing.

CHEP assists three community schools through teacher training and funding. CHEP also introduces the CtC approach to these community schools. Children learn about health in different subjects and they bring back the knowledge and skills to their homes. Also as there are more AIDS orphans in compounds than outside, children's responsibilities for taking care of their siblings and other family members is greater.

One representative example of these community schools is Ipusukilo Community School. This school was started by Ms. Helen Mpundu, a CHEP staff member, two years ago. She is currently the key administrator of the school. The local community donated the school ground and the building, after Mpundu and her colleagues had extensive negotiations with local people. There are 4 teachers working in the school and the compound community provides their salaries with CHEP' supplementation. CHEP also offers the mothers of young babies in compounds health lessons and provides support with agricultural projects.

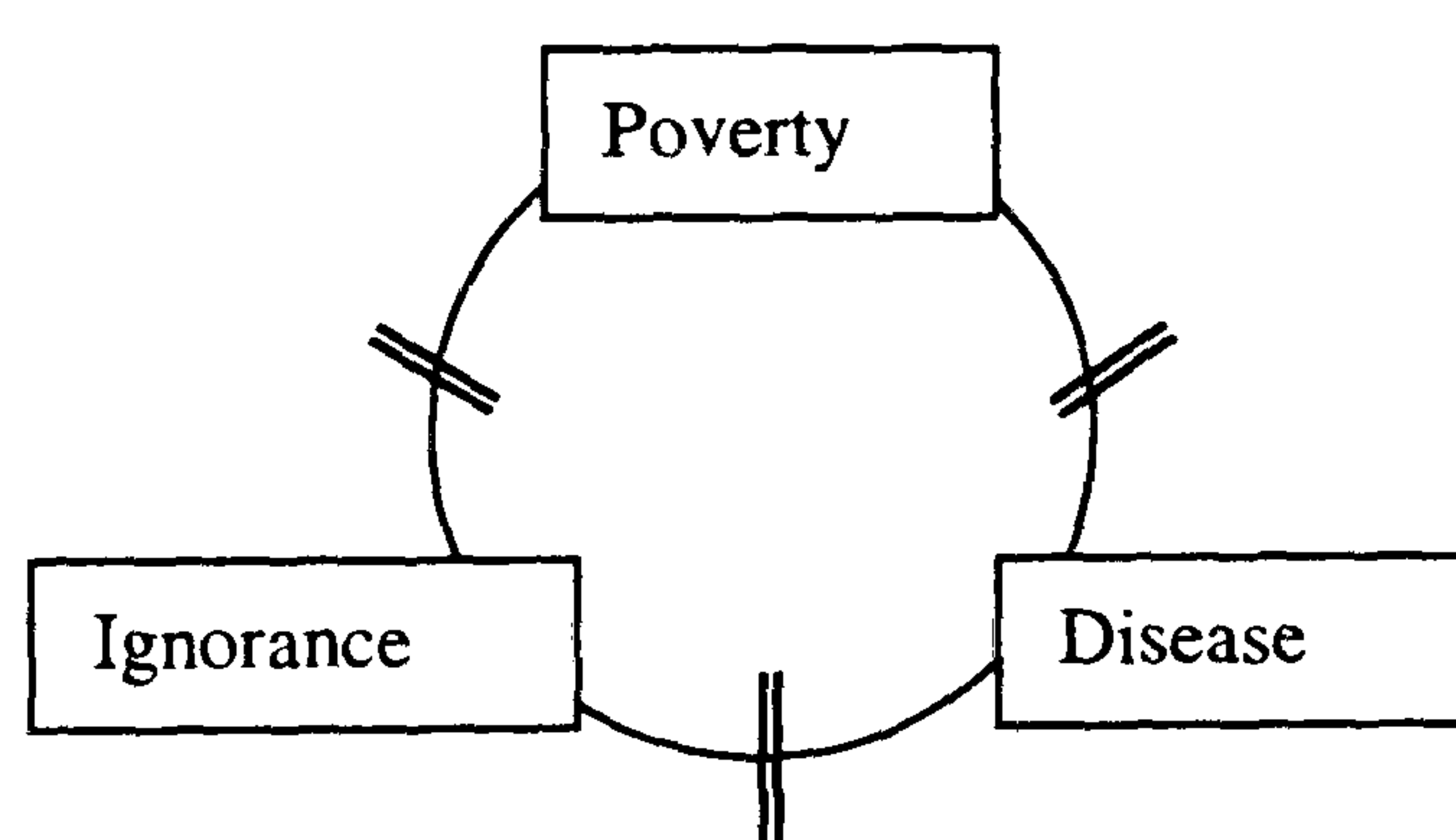
CHEP also facilitates collaboration between primary and community schools. In a few innovative primary schools, children in the CtC spearheading groups started teaching children from compounds that were out of schools. There is one community school in Mutange Compound, which is run by children who are themselves attending primary

school (Nyirenda interviewed on 16/11/1998). Also Matete Primary School invites out-of-school children from a neighbouring compound to the classroom and CtC SHG children teach those children from the compound. Matete School's work will be described further in section 9-3.

Nyirenda, the administrator of CHEP argues that "the CtC approach is so effective that it would help not only children but also health information goes from a child to her family and community. For example, mothers learn how to make ORS [Oral Rehydration Salts] from their children. The impact is especially significant in community schools where the living conditions are harder and poorer" (Nyirenda, interviewed on 16/11/1998).

As CHEP tries to reach the most vulnerable people, educating children and youths in compounds about health is an effective way to break a vicious circle of poverty-ignorance-disease in figure 9.1 (Walker interviewed on 16/11/1998).

Figure 9.1 Breaking a vicious circle



|| effective health education breaking relationships

9.2.3 Out of school youths working as peer educators in compounds

Since 1988, CHEP has been actively involved in working with out-of-school 'youths' within the age group of 15 to 30. CHEP provided a training course to them on survival skills for income generations and healthy lifestyles. However, the trainees were not expected to teach others at that time.

In 1994, CHEP staff recognised the need for expanding access to health information to a larger number of young people. Therefore, CHEP started a new initiative of community based peer education. Under this initiative, CHEP has been training out of school youths as peer educators to promote healthy lifestyles to the people in their compounds.

CHEP invites volunteers to come forward and about 11-15 peer educators are selected from each compound. Most of them have finished at least 7-year-schooling and some are

high school graduates (12-year-schooling). They receive a participatory training course on health that lasts about 7-10 days. The contents of the initial course include basic facts on HIV/AIDS, sexually transmitted diseases, tuberculosis, participatory approaches, facilitation skills, life skills and monitoring methods. After this course, they start working in their compound to promote healthy lifestyles through role-plays, discussions, counselling, sports and home visits (Nyirenda, interviewed on 18/2/1998).

So far, CHEP has recruited 119 peer educators who work with out-of-school young people in 10 areas in the province. Currently 16 peer educators' groups that consist of 11-20 peer educators are working directly under CHEP (Youssef 1997, p.1). 5 peer educator groups out of 16 work from 9:00 a.m. to 1:00 p.m. for 3 days on every Monday, Wednesday and Friday. They review the outreach programme from 3:00 to 5:00 p.m. on every Fridays. They work 14 working hours per week. The other 11 peer educator groups work from 9:00 a.m. to 1:00 p.m. from Monday to Friday, i.e. they work 20 working hours per week.

These peer educators receive some cash as an incentive from CHEP. However, sometimes the payment cannot be made on time due to delays in donors' funding. CHEP also provides additional incentives, such as T-shirts, lunches and other materials or participating in workshops in other regions and outside of Zambia. Peer educators meet at the district annual competition. In this competition, all the peer educators gather to present their work.

CHEP hopes that peer educators would eventually find stable jobs, which can support them fully, and that they would continue to work as peer educators in their work places. This means there is always need to identify and train new groups of the most recent 'out of school youths'. Walker comments on this as follows;

“It is like the CtC programme. Children will not remain as children forever. But we hope that when they become adults, they carry the skills and knowledge they have learnt through the programme. Also once out-of-school peer educators get jobs, they become peer educators of their colleagues. So CHEP constantly train new groups of youths”(Walker interviewed on 20/2/1998).

Although CHEP does not call this programme as Child-to-Child, the basic ideas of peer education were influenced by the CtC approach. For example, peer education provides youths knowledge, skills and confidence to promote healthy lifestyles. Through the peer

education, it empowers out-of-school youths to live healthily and to become role models in their community. (Nyirenda, interviewed on 16/11/1998).

9.3 Case histories of four key people in the Copperbelt Province

This section discusses the roles of key individuals who have contributed to promoting CtC in Copperbelt. Four such people are identified; two of them are CtC district co-ordinators; and the other two are Catholic Sisters. The main questions asked in the interviews are listed in Chapter 5.

The following key people were identified in this case study in the Copperbelt Province;

- Sr. Eileen McLaughlin (Former Provincial CtC Co-ordinator in the Copperbelt and Chairperson of ZOCS)
- Sr. Lynn Walker (Director of CHEP)
- Mr. Samson Sabi (Deputy head teacher and District CtC Co-ordinator in Chingola)
- Mr. Lubinda (Primary School Teacher and District CtC Co-ordinator in Mufulira)

9.3.1 Sr. Eileen McLaughlin

(i) Personal background

McLaughlin was a primary school teacher in Essex, UK for 9 years. In February 1991, she was asked to take a post in Zambia as a Catholic sister from Chigwell Convent by Sr. Vincent (Sr. Vincent had returned from Zambia as discussed in Chapter 7). McLaughlin first went to the ICL for a year to learn about the CtC activities and to work with Kangwa running the workshops.

(ii) The introduction to the CtC approach

McLaughlin explains why she became interested in the CtC approach.

“I found that in many schools in Zambia, there was teacher-centred teaching. Children seemed to be all the time sitting, listening to teachers for hours in very boring lessons. The Child-to-Child is about the whole concept of children participating in their own learning and connecting with their situation. I thought it was an approach which

would move towards a child-centred approach to teaching. That seemed to be the greatest need. And there was a lot more potential amongst children than teachers had any idea” (McLaughlin interviewed on 11/2/1998).

Other key people such as Kangwa and Mumbo had also pointed out that in Zambia, ‘teacher centred’ methods of teaching are predominant. This is why application of the CtC approach requires teachers to internalise the concept and to change their attitudes towards children.

(iii) Involvement with the CtC programme

McLaughlin’s main contributions to the CtC programme were as follows;

i. Support for INSET workshops in the Northern Province

McLaughlin was initially posted to Mpika to learn the CtC applications and school environments in Zambia through working with Kangwa. She recalled her time in Mpika.

“I visited all the districts with Patrick (Kangwa) in Northern Province. I was trying to learn what CtC was about and the school system in Zambia. I watched how Patrick was running the workshops and worked with him. I also tried to see whether I could start something similar in another province” (McLaughlin interviewed on 11/2/1998).

Her direct observations of the way Kangwa worked helped her prepare working as a resource person to spread the CtC approach to other regions.

ii. CtC Provincial Co-ordinator in the Copperbelt Province

In 1992, she moved to Copperbelt and offered to work for the PEO in Ndola on a voluntary basis. The PEO asked her to work as a CtC provincial co-ordinator. She started visiting all the 8 districts in the Copperbelt Province. CAFOD in London was funding her activities such as holding workshops and travelling.

McLaughlin found that many teachers understood CtC as club activities, through which children would perform and sing about health. Also many teachers thought CtC was an extra burden. Therefore in the training workshops, she emphasised that CtC was not an extra subject but it is a method, which would help teachers teach better (McLaughlin interviewed on 11/2/1998).

Each district had chosen 3-5 model schools as pilots for the CtC programme and had expected the programme would gradually expand to more schools. Two TTCs in

Mufulira and Kitwe also had 5 associated schools as pilot schools. However, the activity in these schools is currently less than before. In 1995, Mclaughlin left Copperbelt for Lusaka.

During my visit, a number of teachers in the Copperbelt mentioned her valuable contribution that facilitated them to understand and use the CtC approach. Many teachers and district co-ordinators felt that the activities deteriorated after she left in 1995. Also CHEP has been supporting the provincial and district workshops and other CtC related activities.

iii. Introduction of the CtC approach to community schools

Mclaughlin joined an NGO, Zambian Open Community Schools (ZOCS) in Lusaka in 1995. ZOCS supports 24 community schools in and around Lusaka. She also became the Chairperson of Zambia Community School Secretariat (ZCSS). She had been active in supporting teachers and co-ordinating training workshops. Clement Mumbo, who was seconded to ZOCS from Kabale School in 1997 and 1998, was working together with her. They, therefore, introduced some basic ideas of the CtC approach and health contents to community schools. She returned to the UK in May 1998.

9.3.2 Sr. Lynn Walker

(i) Personal background

Walker worked as a Voluntary Service Overseas (VSO) volunteer at Lwitikila Secondary School in Northern Province from 1966 for two years. At that time, Sr. John Vincent was the head teacher in the same school. After returning to UK from Zambia, Walker became a Sister and worked as a teacher in various primary schools for ten years. Then she worked as a Diocesan Schools Advisor for another ten years in Essex and London.

During her teaching period, she dealt with many disturbed children from poor family backgrounds. She observed that these children learnt better from other friends than from teachers. She also tried to relate learning in the classroom to the actual environment and actions, for example, geography to the Heathrow airport. She believes learning should be related to real life experiences (Walker interviewed on 16/11/1998).

(ii) The introduction to the CtC approach

While she was in UK, she learnt about the CtC programme in Zambia from Vincent, who asked her to go to Zambia. As Walker was already linking school learning with real life situations in UK, understanding the CtC approach was easy and natural for her. She was always a great believer of children's abilities to teach others and to participate in development.

(iii) Involvement with the CtC programme

Walker came to Copperbelt in March 1991 to work for the CtC programme. She worked with local teachers especially in relation to the prevention of HIV/AIDS and promotion of the CtC approach. Subsequently, she realised that when tackling the issues of HIV/AIDS and behavioural change, it is necessary to work with different stake holders, not only with teachers and children. She found that CHEP was working with the wider target groups. Thus she joined CHEP in September 1991 as the director. At that time, there were only 5 staff members (Walker interviewed on 16/11/1998).

CHEP expanded its programmes through a multi-sectoral approach. It also encouraged building ownership among its partners. She strongly believes in the potential of the CtC approach and so CHEP has been supporting the CtC co-ordinators over the period (Walker interviewed on 20/2/1998).

“Peer education is CHEP's main strategy and CtC is one form of the peer education. Since 50% of the Zambian population is children, it is a very large component of our work. We are using it within schools and out of schools. Children in schools teach children out of schools and also teach in community schools. This is a sustainable model of community schools, as children are delighted to do this yet they do not need salaries” (Walker interviewed on 20/2/1998).

CHEP involve district and school CtC co-ordinators in various workshops. For example, recently, they invited them to a social and life skills workshop. Teachers can teach communication, negotiation and participation skills to children when teachers themselves have been exposed and learnt about them.

9.3.3 Mr. Samson Sabi

(i) Personal background

Sabi has been working as a primary school teacher for the last 20 years. As he was active in out-of-school activities, he was chosen to become a CtC District co-ordinator in Chingola in 1990. He also completed his diploma in Religious Education on “The development of Child-to-Child Programme in Zambia” at Westhill College, University of Birmingham in November 1994 by correspondence. Like Mumba, Kangwa and Mumbo in Mpika, he is genuinely interested in quality education and studying further on his own to find better ways of teaching.

(ii) The introduction to the CtC approach

Sabi attended several CtC training workshops organised by Carey and Henze in 1986. When he learnt about CtC there, he was impressed by the fact that

“CtC is more than a child centred approach, but to promote children’s rights. For example, it encourages children to express their feelings and critical opinions. Children are not only to learn, but they also have something to offer to others” (Sabi, interviewed on 21/2/1998).

(iii) Involvement with the CtC programme

As the district co-ordinator of Chingola, Sabi tried to organise two district meetings per term for CtC school co-ordinators. He also conducted some CtC workshops for the head teachers and CtC school co-ordinators. These activities are financially supported by CHEP, not by the MOE. There are 7 priority areas in the activities and each term, the district has to cover one or two areas. These areas are;

- child growth,
- hygiene,
- disability,
- safety,
- safe lifestyles,
- diseases, and
- nutrition.

There are 29 primary schools in Chingola District. In the period from 1992-1995 there were 6 CtC pilot schools in Chingola that were actively involved in the CtC programme.

Sabi was working closely with these six schools. Currently four of them are still active but the other two became less active after trained teachers were transferred.

Sabi has been encouraging children to write poems on health related topics such as AIDS, healthy environment and children's rights. In 1994, he tried to develop a calendar with health poems written by children.

In September 1998, Sabi participated in a three-week training course on Health Promotion in Schools' organised by the CtC Trust at the Institute of Education, University of London. Since his return from UK, he has been trying to organise school-based workshops that involve all the teachers, instead of holding workshops at the district level. The effectiveness of school-based workshops will be discussed further in section 9.6.2.

9.3.4 Mr. M. Lubinda

(i) Personal background

Whessn Lubinda became a primary school teacher, he was very interested in children's activities. Even before leaning about the CtC, he was active in dramas and community theatre activities. He encouraged children to make dramas and to go out to the community. Through these, he saw children's ability to contribute to the community. This made him more interested in these activities.

(ii) The introduction of the CtC approach

Since Lubinda was involved in various activities with children such as dramas, he was chosen by the DEO to attended the CtC orientation seminar in Lusaka in 1987. This was a one-week training seminar sponsored by UNICEF in Chongwe Secondary School. Two teachers from each of the 52 districts in Zambia participated together with resource people from the MOH and University of Zambia (UNZA).

As he was already involved with children's dramas, he knew children's ability to pass information to others. He explains why he became convinced that the CtC approach would work.

“To promote health, it is effective to educate children first and so they can teach their families and community. Inviting children as teachers is important as they can have a lot of impact on other children. When

children learn from other children, they can learn freely without any fear” (Lubinda, interviewed on 23/2/1998).

(iii) Involvement with the CtC programme

After attending the orientation seminar in 1987, Lubinda became the district CtC co-ordinator in Mufulira. He started some activities in his school, then gradually involved more schools nearby. It took some time for schools to apply the CtC concept in practice. Gradually he identified some health workers and farmers who could assist the CtC programme for schools. Children started visiting children’s clinic nearby and learnt about health issues.

Lubinda has been actively conducting training workshops for teachers. Within a year, he had encouraged five schools to start the CtC programme. By the end of 1989, all the schools in Mufulira had learnt about the programme. Most of activities in the district were CtC spear heading groups presenting slogans of CtC, dramas and poems.

Currently he organises various activities throughout the year, including meetings of zone co-ordinators, schools visits, workshops on health across curriculum for school co-ordinators and head teachers and quiz competitions (Lubinda 1997).

9.4 Diversified CtC school activities in the Copperbelt Province

This section discusses some variations of CtC activities carried out by active schools, which are supported by CHEP through district co-ordinators. In particular, a few schools started linking the CtC programme at primary schools with community schools and out-of-school children from compounds.

During my stay in Copperbelt, I visited 10 primary schools to observe their CtC activities. In general, CtC committee teachers try to integrate health with different subjects such as science and social studies. Also most schools have spearheading groups, which consists of 20-30 children. These children lead the activities and build up their confidence to present themselves in front of adults. Consequently they also perform well in the exams (Lubinda, interviewed on 23/2/1998). Ms. Pelya, CtC zone co-ordinator in Mufulira District, stated that parents saw the difference in the performances between CtC ‘active’ and ‘less active’ schools, so these parents liked to transfer children to schools where the CtC programmes were active (interviewed on 23/2/1998).

Some schools such as Matete Primary School and Mudzabwela Middle Basic Schools are very active in linking the CtC programme with the neighbouring communities. In Matete School, children from a compound nearby come to the school in the afternoon and learn some subjects from children in the spearheading group children.

On 20 February 1998, UNICEF staff and I observed science and mathematics lessons conducted by children from the spearheading group. One girl child who taught science was only 11 years old. However, the way she was teaching was not just asking a question to the whole class, but also to each of the children. She was clear in explaining about diseases and prevention. The SHG children also go to the compound to teach as well as bringing children from there to the primary school.

Moreover, the spearheading group children and three committed CtC teachers from Matete School went to St. Anton compound for the first time on 26 February 1998. The purpose of this visit was to facilitate the people in this compound with the organising of a community school. First of all, they sang and danced, then Mrs. Shimeza, the CtC Co-ordinator explained who they were and their aims to the people gathered in the compound. Then children presented a role-play about a girl child who had to work throughout the day instead of going to school. They also presented some poems about AIDS, orphans who lost parents by AIDS and the importance of education for girls. Children and mothers in the crowd were truly enjoying the presentations and many of them also joined the dancing. Shimeza explained if they needed a community school there, Matete school would be ready to support it, so the chair person should come to the school for discussions.

Such linkage between the CtC spearheading children and children in neighbouring compounds is recognised and encouraged by CHEP. CHEP helps other schools to work for local compounds (Nyirenda, interviewed on 16/11/1998).

Mudzabwela School's SHG children went out to the houses nearby the school and demonstrated how to make Oral Rehydration Salts (observed on 25/2/1998). Some other schools were also using the CtC approach in various ways. For example, in utilising role plays in English and other lessons to pass health knowledge; combining learning and practising nutrition education through agricultural projects.

This section discussed diversified CtC activities in the Copperbelt. Especially Matete School's SHG children were actively involved with helping children in neighbouring

compounds. CHEP facilitates and encourages other primary schools to implement such activities.

9.5 Enabling factors of going to scale

In this case study, various enabling factors and constraints to scaling up the CtC programme are identified. This section discusses these enabling factors for going to scale. Some of the interrelated enabling factors are summarised in Table 9.1;

Table 9.1 Summary of enabling factors which facilitated scaling up

Three aspects	Enabling factors
(1) System change	i. A local NGO funded by a consortium of external donors supporting the government programme through funding and training
	ii. A strong personal network under Catholic churches
(2) Quantitative change	i. Constant training workshops
	ii. Diversified CtC applications through out-of-school youths and primary and community schools
(3) Qualitative change	i. Identification of committed teachers as resource persons in the workshops
	ii. Children's improved performances and parents' positive feedback

9.5.1 Enabling factors for system change

(i) An NGO supporting a government programme through funding and training

Although the CtC programme started as a national programme in 1986, there was hardly any funds available from the government. In the Copperbelt, the CtC district and school co-ordinators have been supported by the NGO (CHEP) through funding and training. Such a collaboration between the governmental system and a local NGO helped the programme to scale up in the Copperbelt.

(ii) A strong personal network under Catholic churches

Some of the key people who initiated and promoted the CtC programme in Copperbelt were working closely under the Catholic Churches' network. Section 9-1 observed that

Carey introduced the approach to the Copperbelt. While Walker worked as a mathematics teacher in Zambia for two years in the late 1960's, Vincent was the head teacher in the same school. Subsequently, Vincent, Walker and McLaughlin all belonged to the Chigwell Convent in London. Since Vincent was in the position to decide the Sisters' posts, she asked Walker and McLaughlin to go to Zambia to continue the CtC programme. Both Walker and McLaughlin continued promoting the CtC approach for various target groups.

Such close personal networks through church organisations as well as access to the external funding brought a significant impact on initiation and scaling up the CtC programme in Zambia.

These people worked closely with local people to ensure that ownership remained with the primary stakeholders. This has facilitated a transfer of skills and created a strong network of Zambian resource people.

9.5.2 Enabling factors for quantitative change

(i) A long-term support to schools for the CtC programme

Because of the access to external funding through McLaughlin and Walker, schools in Copperbelt could benefit from training workshops and meetings organised by CtC district co-ordinators. As Walker has been the Director of CHEP since 1991 to date, the institutional support to the CtC programme remained unchanged and consistent. This was not the case with the lead NGO (ICL) discussed in Chapter 7.

(ii) Diversified CtC applications through out-of-school youths and primary and community schools

CHEP's long term support and multi-sectoral programmes reinforced the CtC programme not only in primary schools but also community schools and out-of-school youths in Copperbelt. A few primary schools started extending the CtC activities to community schools. In addition, although age groups are different, out-of school peer educators implement a similar programme to CtC. Similar to the DLTTTC's community school and gender education, in Chapter 8, the CtC approach has scaled up through reaching wider target groups and infiltrating programmes.

9.5.3 Enabling factors for qualitative change

(i) Identification of committed teachers as resource persons in the workshops

As is observed in Chapter 7, identifying committed teachers and using them as resource teachers is an effective way to influence other teachers to opt in to an innovative programme. In Copperbelt, Sabi and Lubinda were selected as CtC district co-ordinators because of their active work in their schools. Consequently, they remained active and committed to date. Moreover, these talented teachers have been identified and supported by CHEP and such a mechanism is crucial to scale up and sustain the programme.

(ii) Children’s improved performances and parents’ positive feedback

As is observed in section 9-3, the CtC school activities can improve children’s academic performances and parents prefer to send their children to such schools where the CtC programmes are actively implemented. Such positive outcomes are important for teachers to start and continue using the approach.

9.6 Constraints of going to scale

Some interrelated constraints to scale up the CtC activities in the region have been identified and are summarised in Table 9.2. These are discussed in more detail in this section.

Table 9.2 Summary of constraints for scaling up

Three aspects	Constraints
(1) System change	<i>i.</i> District co-ordinators’ restricted access to transport
	<i>ii.</i> Lack of support from the CtC Directorate and the MOE
	<i>iii.</i> Change in large donors’ priorities
(2) Quantitative change	<i>i.</i> Ineffectiveness of INSET workshops outside of the schools
(3) Qualitative change	<i>i.</i> Reluctance of teachers to use the CtC approach
	<i>ii.</i> Under utilisation of resource materials and training workshops

9.6.1 Constraints for system change

(i) District co-ordinators' restricted access to transport

For educational officers and CtC co-ordinators, access to transport is critical, as schools are scattered in large areas. It is common to observe misuse of project cars and inadequate maintenance. When a car is donated for the CtC programme, often the DEO and/or PEO have control over it. Such bureaucratic conflicts over resources are observed in all the case studies.

In general, many government officials in Zambia ask donors to provide vehicles for their work. However already a number of vehicles have been donated to local educational offices. Many are out of order as there was no funds for maintenance. Others are functional, but often misused or there is no budget for petrol. For example, in 1993, UNICEF donated a vehicle to the CtC District co-ordinator in Mufulira for the programme. However, the Mufulira TTC kept it and have used it, not for the CtC programme, but for general administrative purposes (Lubinda, interviewed 23/2/1998).

(ii) Lack of support from the CtC Directorate and the MOE

In the Copperbelt, the CtC programme has depended on external funds such as CAFOD and CHEP and has not received funds from the MOE. In particular, there was no budget for CtC co-ordinators at district and school levels. If CHEP stops its technical and financial support to the programme, these co-ordinators activities are no longer sustainable.

Sabi points out the following;

“The activities in the school level depend heavily on the teachers' commitment. There is almost no incentive for both district and school CtC co-ordinators. Many teachers are teaching double shifts, but the salary increase is just 25%. It is difficult to keep the teachers' enthusiasm and commitments without incentives or seminars to support them” (Sabi, interviewed on 21/2/1998).

Since the MOE's budget is limited, it is difficult for the MOE to provide CtC workshops or monitoring visits. Instead, as is discussed in Chapter 7 and 8, some simple letters from the DEO to give recognition to these active teachers and schools would provide a sense of pride and encouragement. However, the sustainability issue needs to be addressed.

(iii) Problems of donors' priorities and bureaucracies

CHEP is funded by four international donors. However, the turn over rate of donors' staff, especially the expatriates, is high and often individuals decide the priority areas in the country. This causes difficulties to NGOs such as CHEP in sustaining their projects. Also CHEP is dealing with health, education and also poverty alleviation in a comprehensive way, however, donors normally have separate sectors and budgets on health and education. It is difficult for large donors such as the World Bank and UNICEF with huge bureaucratic systems to change from single sectoral to multi-sectoral approaches.

9.6.2 Constraints for quantitative change

(i) Ineffectiveness of INSET workshops outside of the schools

Sabi explains why the workshops outside of schools were ineffective.

“If you pick up one teacher from each school and hold a seminar at the district level, the information is not disseminated. That kind of cascade system is distorting the message. Also it does not create the ownership of the programme for other teachers. We conducted such seminars in the past, but most teachers did not get the real concept of the CtC as methods. It is better to give the first hand information to all the teachers rather than the second or third hand information” (Sabi, interviewed on 15/11/1998).

This view is widely shared by other key people in all three case studies.

9.6.3 Constraints for qualitative change

(i) Reluctance of teachers to use the CtC approach as a loss of their authority

In Zambian culture, asking teachers questions is regarded as rude. Also most teachers are not used to being challenged. Many are not confident to handle unsolicited questions from children, especially when the answers are not written in textbooks. McLaughlin experienced that some teachers feared losing their authority by using the approach. Therefore, at the workshops, she emphasised as follows;

“The CtC approach is not to under-estimate you, but this is the method, which help you (teachers) become better teachers. Although children should be free in the classroom, it does not mean that you would lose control or anything” (McLaughlin interviewed on 11/2/1998).

This is a common issue raised when introducing the CtC approach. It is therefore vital that some innovative teachers show the practical applications of CtC to their colleagues. In this way, their colleagues have more motivation to adopt the approach.

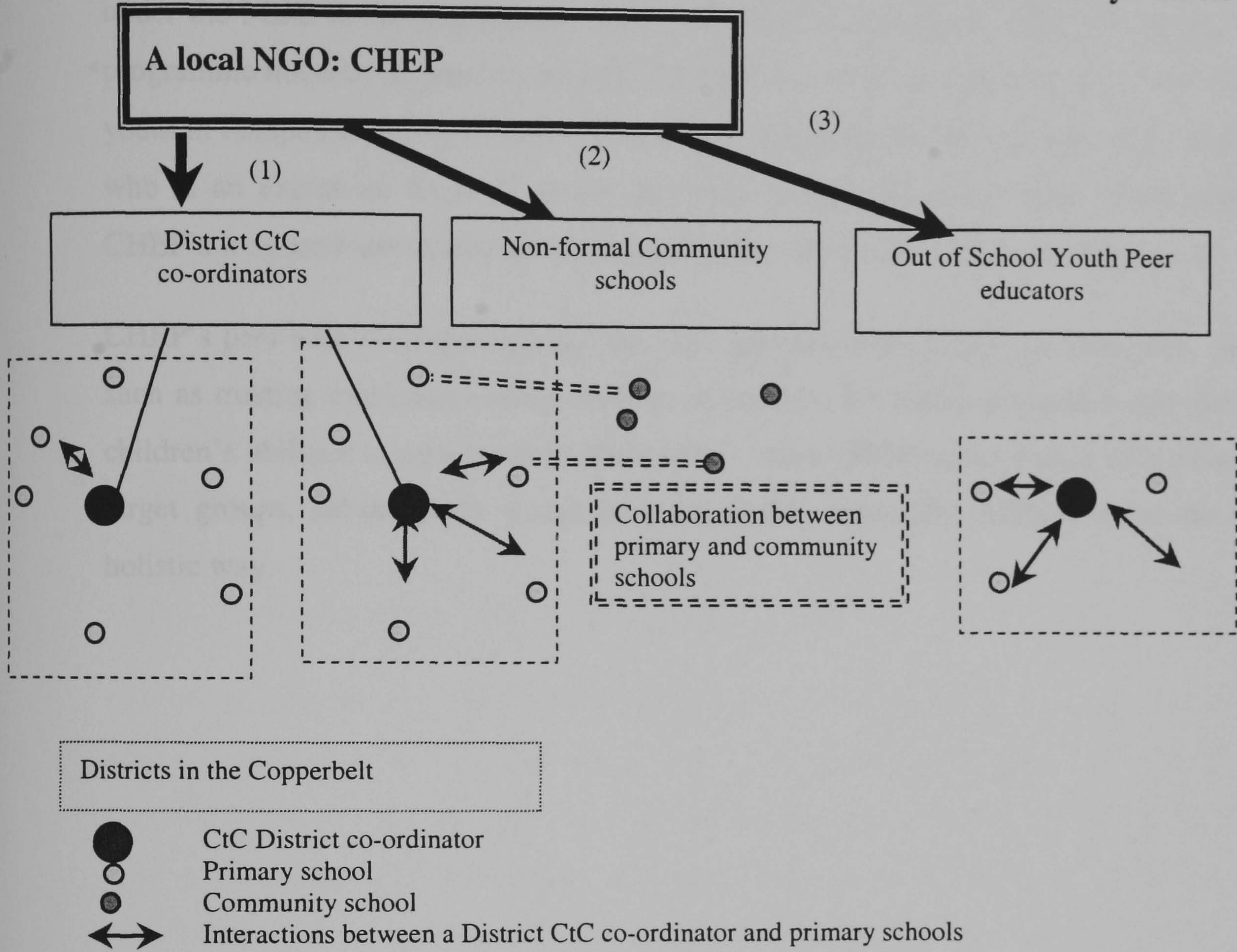
(ii) Under utilisation of resource materials and training

Most schools received some CtC materials such as WASHE flipcharts and ‘Children for Health’ (Hawes and Scotchmer 1994), which were donated by UNICEF. However, many teachers thought that these materials were for home economics. In some cases, they are just in the cupboards of the head teacher or in the library without being used. These are the result of providing materials without training and following up.

9.7 Summary of case study 3

Figure 9.2 summarises the main features of this case study.

Figure 9.2 A local NGO assisting CtC co-ordinators and community schools



Case study 3

The Copperbelt Health Education Project (CHEP), a local NGO has assisted training seminars for district, zone and school CtC co-ordinators. Although the CtC is a national programme, MOE could not provide resource to these co-ordinators. Instead, CHEP is supporting their activities through financial and technical assistance. CHEP also introduces the CtC programme to 'community schools' in 'compounds' and assists out-of-school youths to learn and promote healthy life styles to their peers. Thus this case study is about scaling up the CtC programme by involving additional target groups to primary school teachers and children. This case study also provides an example of collaboration between the government system and a local NGO.

CHEP facilitated the CtC programme to scale up through;

- (1) providing technical and financial support to CtC district and school co-ordinators
- (2) connecting primary and community schools
- (3) applying the CtC approach to out of school youth peer education in 'compounds'

9.8 Conclusions

In this case study, CHEP, a local NGO (receiving funding from a consortium of external donors) has been supporting the district and school CtC co-ordinators, who are working under the MOE in the Copperbelt. This collaboration promoted and scaled up the CtC programme not only in primary schools, but also in community schools and out-of school youth in compounds. CHEP has access to funds from large donor agencies. The director, who is an expatriate Catholic Sister, has been unchanged since 1991. This enabled CHEP's long term and consistent assistance to the CtC programme in the Copperbelt.

CHEP's peer education strategy and the CtC approach share many common basic ideas, such as trusting and empowering children as partners for health promotion and valuing children's abilities to communicate their peers. Also CHEP works with a wide range of target groups, subsequently it can promote health, especially AIDS prevention, in a holistic way.

Chapter 10 Analysis of the three case studies: enabling factors and constraints of scaling up the CtC Programme

10.1 Introduction

Chapters 7, 8 and 9 presented three case studies of scaling up the CtC programme in Zambia. This chapter analyses the main findings and the enabling factors and constraints of going to scale in these three case studies. Subsequently it examines models of scaling up the CtC approach, which may have potential relevance.

10.2 Scaling up the Child-to-Child programme in three case studies

As is discussed in Chapters 7, 8 and 9, the CtC programme has scaled up in different ways in each case study.

10.2.1 Summary of key individuals' roles in each case study

One of the common elements in all three case studies is that a few key individuals have played significant roles in scaling up the CtC approach. These individuals have contributed to scaling up the CtC programme through quantitative, qualitative and systemic change. Moreover, their personal commitment and enthusiasm kept the CtC programme alive despite the lack of a supportive framework. These individuals include Zambian school teachers and college lecturers who are genuinely interested in improving their teaching and students' learning. The others are expatriates, who work collaboratively under the auspices of the Catholic churches and had access to external funds. They are also influential within the local and central governments. Consequently, the three case studies shall be reviewed, highlighting the actions of each of these key individuals.

In Case Study 1, it was such key individuals who have continued to promote the approach in the region since 1981 till today. Although the ICL, a local NGO, assisted INSET workshops in the period 1985-1994, its contribution to INSET was shorter than these individuals' inputs. These individuals are Fr. Carey and Sr. Vincent who are expatriates working for Catholic churches, and Kangwa, Mumba and Mumbo who are innovative Zambian teachers in the Northern Province.

To summarise these key individuals' involvement in Case Study 1, Carey and Vincent started introducing the CtC approach in 1981 using INSET throughout the Northern Province. Then in 1985 they established the ICL, a local NGO in Mpika to institutionalise and fund the CtC initiative. Carey was the director of the ICL until 1989. They also identified Kangwa as an innovative teacher and asked him to assist and latterly take over their CtC initiative. Carey and Vincent left Mpika in 1989, however, subsequent directors at the ICL were not familiar with the CtC concept and were reluctant to provide funding. Kangwa therefore had to convince the new directors of the ICL that the CtC approach was valuable. Kangwa also identified other innovative teachers, Mumba and Mumbo who collaborated with him. The ICL stopped its funding for INSET in 1995. Kangwa, Mumba and Mumbo held occasional workshops around Mpika and also assisted their colleagues in Kabale School. They created a critical mass and helped each other to develop the CtC activities. Thus these key individuals have sustained CtC activities within the region due to their commitment and enthusiasm.

In Case Study 2, a few enthusiastic lecturers in the DLTTTC have continued the CtC programme since 1989 in collaboration with the MOE and UNICEF. Although the CtC approach was introduced to all the TTCs by 1991, only the DLTTTC remains active in implementing and diversifying the CtC activities. The key individuals are Syamwenya, M'zumara and Kasaro. They assisted the five associate schools to implement the CtC activities through workshops and fund-raising until 1994. They also extended the CtC programme through establishing a community school in the college for two neighbouring compounds. Moreover, both Syamwenya and M'zumara were involved with curriculum development for gender education as part of the CtC activities.

In Case Study 3, the government appointed district co-ordinators, who were assisted by Sr. McLaughlin, working as the Provincial CtC Co-ordinator in 1992 to 1994. CHEP, a local NGO directed by Sr. Walker, has also supported the district co-ordinators and schools since 1991 to-date. Two District Co-ordinators, Lubinda in Mufulira District and Sabi in Chingola District have been active in promoting the CtC approach in their districts since 1987 and 1990 respectively. Walker, Lubinda and Sabi continue to be active and to remain in the same positions. Such long-term personal commitments have helped sustain the CtC programme in the province.

Generally throughout the schools and colleges, the individuals' initiatives determine the quality of the CtC activities. Also these talented teachers can motivate their colleagues

to adopt the CtC approach by demonstrating practical examples and positive outcomes. It is, therefore, critical to create a system in which those committed individuals are identified and enabled to support their colleagues through personal interactions. Kabale School in Case Study 1 exemplifies this.

10.2.2 Impact of the training workshops among schools

The overall impact of the INSET workshops provided by the ICL in Case Study 1, DLTTTC in Case Study 2 and district co-ordinators and CHEP in Case Study 3 was generally positive for those schools closest to the organisations providing the INSET workshops. These workshops helped schools to participate in the CtC programme and all the schools involved still have CtC committees and spearheading groups. As the CtC committees have been institutionalised in those schools, even when the trained co-ordinators were retired or transferred, new school co-ordinators continue to be appointed. Also these workshops helped some innovative teachers to start applying the CtC approach in their teaching.

The situations observed in two schools in Case Study 2 demonstrated that even if school teachers have not attended INSET workshops, enthusiastic and informed head teachers and teachers that are interested in the approach would start trying to apply it. On the other hand, some teachers who participated in a number of workshops do not apply the approach into their teaching. Chiwela (interviewed on 21/11/1997) also points out that some teachers understand the CtC concept very well, however, they do not use it in practice. Thus INSET workshops are useful, however, they do not guarantee the mobilisation of the participants to start the activities in their schools.

In all case studies, out-of-school workshops caused some problems. In the out-of-school workshops, often 15-20 schools were selected and one teacher was chosen from each of school to participate in the workshops. Each teacher was expected to understand, become convinced by and internalise the concept within the workshop, then to bring back acquired knowledge and skills to their school for disseminating and convincing all their colleagues to similarly adopt the concept. In reality, such workshops caused jealousies among the colleagues and disseminated information was often distorted. This jealousy created a hostile environment, which prevented the participants from involving the other teachers to adopt the concept. Also there was a lack of ownership of the CtC programme

among all the staff members. As a result, a simplified interpretation of CtC has spread and many teachers regard CtC as extra-curricula club activities.

School based workshops can be more effective in avoiding the problems described above. There are three main reasons for this. First, information will not be distorted. Second, all the teachers feel responsible and have a sense of ownership. Third, in Zambia, it has been normal practice for training workshops to be funded by organisations out of the schools and participants expected to receive a daily allowance, stationary and lunch. This made the workshops expensive and as participants and schools were not contributing to the cost of the workshops, they became passive participants. By sharing a reasonable expense, schools and teachers are more likely to commit to the programme and to try to make it succeed. With a scarce budget for the MOE, this may be a more financially sustainable strategy. However, this does require there to be a community-based demand for the school to allocate valuable budget to acquire these skills.

10.2.3 Access to external funding

Overall, the MOE could not provide sufficient funds or effective training to regional and school CtC co-ordinators under the declining economy. Consequently the CtC programme is most actively implemented in the regions where local NGOs and international donor agencies assist the programme, such as in the Northern Province in Case Studies 1 and Copperbelt Province in Case Study 3. However, such reliance on external funding organisations is not sustainable.

As was recorded in Case Study 1, changes of personnel in funding organisations often changes their priorities. In Case Study 2 the DLTTTC's CtC activities was assisted by UNICEF until 1993, fortunately, the college has since been self-reliant in terms of funding the CtC activities within the college and this has contributed to them being sustained. Although CHEP, described in Case Study 3, is funded by external donors, it has reduced its vulnerability to policy changes within the donor organisations by drawing funds from four international organisations. This has spread the risk and has allowed CHEP to continue supporting the district co-ordinators effectively. However, CHEP's activities remain unsustainable without external intervention.

The success that each of these initiatives have had in scaling-up their CtC activities is limited in; systemically, their activities are limited to CtC committees and SHGs, quantitatively to a limited number of schools local to the lead organisation: in quality in

that a very limited number of schools currently implement a comprehensive CtC programme: .

Therefore, it is unlikely that neither a government funded programme nor an internationally funded programme could provide sufficient resources to bring about a comprehensive educational change in the whole of the Zambian education system. This highlights the need to incorporate sustainability at the heart of a successful model for scale-up of educational change.

10.3 Enabling factors for scaling up the CtC programme in three case studies

This section will examine the enabling factors identified in three case studies. Although many of the enabling factors are inter-related, they can be divided into three groups, factors enhancing (1) system change, (2) quantitative change and (3) qualitative change. The following Table 10.1 summarises these three aspects of change and enabling factors from three case studies. Also as is summarised in Chapter 6, the MOE has taken a number of efforts, such as health across the curriculum and appointments of CtC co-ordinators throughout the system. These efforts also helped to scale up the programme in the three case studies.

Table 10.1 Three aspects of change and enabling factors of scaling up

Three aspects	Enabling factors	Case study		
		1	2	3
(1) System change	The central government's approval	✓	✓	✓
	Access to external funding and training	✓	✓	✓
	A strong personal network under the Catholic church	✓		✓
	Diversified CtC activities through formal and non-formal education and through various educational projects		✓	✓
(2) Quantitative change	Supportive head and administration, district and provincial co-ordinators	✓	✓	✓
	Relevance to local situations	✓	✓	✓
	Training workshops	✓	✓	✓
(3) Qualitative change	Identification of committed teachers as resource persons in the workshops	✓		
	Creating a critical mass of 'concept and skills mastered' teachers in a school who can mentor and transfer their knowledge and skills to their colleague	✓		
	Commitments and enthusiasm of individuals	✓	✓	✓
	Children's feedback and improved performances as an incentive to teachers	✓		✓
	Recognition by provincial and district educational offices			✓

10.3.1 Enabling factors for system change

Case Studies 1 and 3 described how a personal network under Catholic churches has contributed to introducing and scaling up the CtC approach both regionally and nationally in Zambia. For example, Carey and Vincent's personal contacts and influential positions in Zambia enabled the CtC programme to be launched nationally in 1986. The central government's approval provided legitimacy to institutionalise the programme through system change. This can be described as "multiplicative strategy" (Edwards and Hulme, 1992, p.16), which does not imply growth of programmes or organisations but it achieves impact through deliberate influence, networking, policy and legal reform or training.

Carey and Vincent also identified and assisted some committed individual teachers to become resource people in the programme. After their return to the UK, they continued to facilitate the programme through the church's framework, encouraging other Sisters to continue supporting the programme in Zambia.

Also key individuals who are Zambian teachers and TTC lecturers, are now recognised by the MOE and donors such as UNICEF and CAFOD. As a result, they are involved with training, co-ordinating projects, developing INSET materials. For example, Kangwa is co-ordinating an inclusive education project, Mumbo was seconded to an NGO working for community schools in Lusaka with McLaughlin, Mumba is leading the Classroom Health Material Projects, Syamwenya and M'zumara in the DLTTC developed gender across curriculum and provided workshops to 6 TTCs.

Section 3.3 in Chapter 3 commented that Havelock and Huberman (1997) classify an innovation through such personal networks and social interactions as "social interaction" (Dalin 1978, p.70). In Zambia, innovative ideas have moved through personal contacts and network from Catholic missionaries to the President and from innovative teachers to their colleagues.

In addition, the CtC approach is spreading through diversification of target groups as well as different educational projects. In Case Studies 2 and 3, introduction of the CtC approach is not only confined within formal primary schools but also in non-formal community schools. The approach is also used in promoting gender education through PAGE.

10.3.2 Enabling factors for quantitative change

As is discussed in section 10.2.2, training workshops in all three cases brought some positive impact on scaling up the CtC programme. The schools, which received the out-of-school based workshops still keep the CtC committees and continue some activities. However, school based workshops appear to be more effective than the workshops given outside the schools.

The CtC approach has become more relevant to the local situations with the recent HIV/AIDS epidemic and other health problems such as malaria. The number of orphans is increasing rapidly and they often drop out from schools and live with relatives who are not always welcoming. Under such situations where adults are busy coping with their

lives, it is important for children to help each other both physically and mentally. Therefore, affected communities that are shown the increased relevance of the CtC approach may be more likely to demand the approach be used within their schools and adopt it in their lives.

In general, schools with supportive head teachers with active school co-ordinators have more teachers involved in the CtC programme than a few CtC committee members. Also these schools tend to involve more children than members of spearheading group.

10.3.3 Enabling factors for qualitative change

As is discussed in Chapter 3, teachers are more likely to learn new teaching methods from direct observation and trial and error in their own classrooms than they are from abstract descriptions of new teaching methods (Elmore 1996). Kabale School in Mpika in Case Study 1 provides such an example of teachers applying the CtC approach through the observations of resource teachers' lessons and their trials and errors.

In Kabale, three innovative teachers created a critical mass of CtC resource persons. They were all genuinely interested in improving their teaching and children's learning. These teachers collaborated and developed various applications of the CtC approach under their own initiative. Then their colleagues looked into their classrooms and became convinced the CtC programme was effective. As a result, these colleagues started using the approach with these three resource teachers' assistance through personal interactions. Such conditions enabled a meaningful qualitative change in teachers' behaviour and attitudes. However, it is recognised that this is a very slow process. The possible effective models of scaling up involving such qualitative change will be discussed further in section 10-4.

Since budget is scarce, it is not realistic or sustainable to expect financial incentives or more workshops from the MOE. Instead, an alternative form of incentives for teachers is positive feedback from children, parents and local educational offices.

Several teachers in all three case studies observed positive changes in children's behaviours and attitudes after using the CtC approach. Some parents in Case Study 1 also appreciated that their children were becoming more responsible in looking after their siblings and were improving their academic performance. Also parents in Case Study 3 saw the difference in the performance between CtC 'active' and 'less active' schools, so

they started moving their children from the ‘less active’ to ‘active’ schools. Improvement in students’ examination results is visible and can convince teachers to start applying the approach. In addition, Case Study 2 noted that letters of acknowledgement from the DEO to give recognition would provide a sense of pride and encouragement to these active teachers and schools.

This kind of self-generating incentives within the classroom and from the community would encourage the teachers to continue using the approach in a long term. Such demands and appreciation from parents and education offices contribute to creating “a winning spirit and a culture of success” (Ordonez & Montana 1998, p.29) and “strong professional and social normative structures for good teaching practice” (Elmore 1996, p.18).

This section examined the enabling factors for scaling up the CtC programme in the three case studies. Overall, there is a wider range of inter-related factors, which enabled the programme to spread. The following section will discuss the constraints.

10.4 Constraints for scaling up the CtC programme

The following Table 10.2 summarises three aspects of change and respective constraints for scaling up, identified in three case studies.

Table 10.2 Three aspects of change and constraints for scaling up

Three aspects	Constraints	Case studies		
		1	2	3
(1) System change	Lack of funding from the MOE	✓	✓	✓
	Change in priorities and personnel in NGOs and donors	✓		✓
	Lack of capacity in the education system to deliver the CtC programme	✓		✓
	Under utilisation of resource materials such as “Children for Health”, WASHE green folders	✓	✓	✓
(2) Quantitative change	Lack of support from head and administration, district and provincial co-ordinators	✓		✓
	Lack of training for regional co-ordinators, teachers and lectures	✓	✓	✓
	Ineffectiveness of INSET workshops outside of the school	✓	✓	✓
	Lack of institutional memories in a school		✓	✓
(3) Qualitative change	Difficulties in applying the CtC concept in practice	✓	✓	✓
	Discouragement and jealousy received from colleagues	✓	✓	✓
	Dependency of individual commitments rather than a system	✓	✓	✓
	Lack of recognition by provincial and district educational offices	✓	✓	

10.4.1 Constraints for system change

The severe declining economy started in the mid-1970's with the collapse in copper value has been affecting Zambia in all sectors, including education. This created dependency of the government on donors' funds for educational programmes. Teachers and educational officers are underpaid yet overloaded. Extended family members rely on the people who earn anything regularly and often teachers are supporting many of their relatives. This tendency has been accelerated by the HIV/AIDS epidemic. This reality deteriorates quality of education.

The lack of capacity in the MOE could not deliver the national policy to regions. For example, Kangwa had to persuade the local educational officers even in 1991 that the CtC programme was a national programme approved by the MOE. This exemplifies the fact that schools and regional education offices are “often only ‘loosely-coupled’ to the

long chain of command originating from the central ministry and are therefore difficult to reach – geographically and bureaucratically – with innovations” (Shaeffer 1994 p.S-1).

Another constraint within the Zambian system is that even when new materials are produced and distributed, they are often to be found in head teachers’ cupboards or libraries, without being recognised that they are resource materials teachers to use to implement the programme.

10.4.2 Constraints for quantitative change

In the school level, often the CtC programme is left with a limited number of teachers and children who are in the CtC committee members and SHG. This is a consequence of ineffective training workshops, delivered by the MOE, NGOs or TTCs. This is described in section 10-1-2.

Moreover, there was a critical problem in the process of scaling up the CtC programme from pilot associate schools near TTCs to all schools throughout Zambia in 1994. The MOE in collaboration with UNICEF implemented this programme of expansion through cascade type one-off seminars at provincial and district levels. For example, in the Southern Province, an orientation workshop was held at the Charles Luwanga TTC for all nice district-school-inspectors, who were appointed as the CtC district co-ordinators. Then each district was given a fund to provide an orientation seminar for zone co-ordinators and schools. Such a cascade model of one-off seminars can only spread a simple interpretation of the CtC concept, for example as a club. But it is not reasonable to expect that a comprehensive understanding of the complexities associated with the CtC approach to reach many schools (Kasaro interviewed on 19/11/1998).

In short, CtC school co-ordinators located near to either TTCs or the externally-funded NGOs were able to participate in some training workshops. In contrast, the other schools in the rest of Zambia at most received a one-off workshop. Through such workshops, it was not possible for teachers to understand the CtC concept and to change their teaching practices.

10.4.3 Constraints for qualitative change

As is discussed in Chapter 4, the CtC approach has many dimensions and people interpret it in various ways. This complexity of the concept makes it difficult to

understand it and utilise it in practice. Even innovative teachers such as Mumba took some time to understand it and then to start using it.

In all case studies, enthusiastic teachers faced discouragement and jealousy from their colleagues when they tried to use the CtC approach. This is clearly described by two teachers in Case Study 1 as follows;

“If they see someone works harder, they don’t feel okay, because they think she or he may progress better than them. So if you do not know where you stand, you are easily discouraged” (Mulenga interviewed on 8/6/98).

“If the head praises a committed teacher, the others feel that their failures are revealed. It is common in the Zambian traditional society. If you work hard and produce more crops than others, you would be hated” (Mumbo, interviewed on 11/11/1998).

Only the teachers who overcome such discouragement continue their innovative activities. This is another reason why school based training workshops involving all the staff members are more effective in creating ownership of the programme than those conducted outside of schools.

Low morale is endemic throughout the education system due to teachers’ not being well paid and over worked. Many schools operate double or triple shifts but teachers receive only 25% of salary increase (Sabi, interviewed on 21/2/1998). Thus teachers are reluctant to do anything extra for which they are not given any incentive. Also although district and school CtC co-ordinators are appointed, the regional and central education offices do not provide resources, feed back or acknowledgements. As a result, these co-ordinators feel isolated yet the whole programme depends on their commitment.

This section discussed the constraints identified in the three case studies. There are a number of constraints, which need to be overcome for effective scaling up. The following section will examine the possible effective model of scaling up involving qualitative change.

10.5 What can be realistically scaled up with the CtC approach?

Chapter 4 observed that the CtC approach has many dimensions. It has been interpreted as “peer education; promoting children’s rights; linking home with school; active methodology; or a unifying force in the curriculum” (Hawes interviewed on 30/6/1999). With such a wide range of interpretations, what can be realistically scaled up and planning

how to implement this needs to be examined before moving onto the practicalities of trying to do so.

In Zambia, the CtC programme evaluation in 1997 reported that 95% of Zambian schools were categorised as Stage 1, whereas 1 or 2 % of schools were at Stage 4 (MOE 1997). A problem with this classification is that although it described the school activities and was developed as a guideline for the future, subsequently, it was used to judge the schools. However, teachers and educational officers were not informed of these criteria from the beginning. For example, teachers were not informed that forming a CtC club was not sufficient to be considered a good CtC activity, as CtC should be used throughout the curriculum for all its students. In other words, there were problems with clarity of objectives.

Another issue arising from this review process is whether it is reasonable to expect all the schools would satisfy the Stage 4 criteria even if appropriate training is provided and mentoring systems within schools are established. Shaeffer (1996) similarly asks;

“What kind of change-innovation, reform, improvement can realistically be expected to go to scale in order to overcome the paralysis of low motivation, decreasing demand, and increasing dissatisfaction with schooling found in much of the world? What will it take to dynamize schools, teachers, principals and communities in order to break what is often a vicious circle of poor quality education and community apathy towards education?” (Shaeffer 1996, p.S-4)

Even in the USA at the peak of educational reform, only 25% of teachers were found to change their methods of teaching (Elmore 1996). With a declining economy creating hard living and working conditions, in Zambia the fundamental question would be what kind of CtC activities can be realistically expected to scale up without losing its “essence” or “uncompromisables” (Chambers 1995, p.60). This again raises the question ‘what are the ‘uncompromisables’, as originally posed in Chapter 4. However, it is recognised that providing a list of uncompromisables for the CtC approach would reduce the diversity of dimensions encompassed therein. A list of uncompromisable is relevant when a new programme employing the CtC approach is being designed, thus bringing clarity to the desired objectives. In addition, as is discussed in section 3.6.5, Chapter 3, the CtC committees among teachers and children’s CtC SHGs’ activities can be one of the “more enduring secondary effects”(Shaeffer 1994, p.S-4).

10.6 Potential relevant models of going to scale

Chapter 3 identified several barriers in educational change. The three case studies in this research also identified a number of factors that constrained the scaling up the CtC programme in Zambia. These barriers and problems demonstrate that there is no single effective model of going to scale, which would be applicable to every context. This section therefore examines models that have been observed in the course of this research as having had a degree of success.

The three case studies demonstrated the following three significant issues in order to scale up the CtC programme using the CtC approach.

- i.* Harnessing the personal commitments and enthusiasm of innovative teachers and lecturers is the most important necessity for economic and sustainable scaling up of the CtC programme in Zambia. They are so called ‘early adopters’ of innovation (Rogers 1983) and have readiness to try the new ideas in their teaching. Chapter 3 also demonstrated that such talented teachers are a minority, however, they have the potential to influence other teachers to change teaching practices (Elmore 1996).
- ii.* The majority of teachers are more likely to start using the CtC applications through observations of practical applications and personal interactions with the innovative colleagues. This confirmed Elmore’s (1996) argument that teachers are more likely to learn from direct observation than they are from abstract descriptions.
- iii.* School based workshops seem to be more effective in creating the ownership of the programme and in avoiding information distortion and personal jealousies. This was discussed in section 10.2.2. This confirms Harvey’s (1997) finding that workshops without classroom based support had little impact on most teachers’ teaching methods.

These three main issues are taken into account in considering the following three potential relevant models for achieving scaling up of educational change.

10.6.1 ‘Japanese bath’ model

One of the main findings from the case studies is the ineffectiveness of out-of-school workshops. Typically, an organiser invited one teacher as a representative of each of 20

schools. It was expected that these teachers to understand the concept immediately and to train their colleagues in their respective schools. One of the participants of these workshops in Case study 1 expressed difficulties encountered by using an analogy of adding a cup of hot water into a bath of cold water. A cup of hot water cannot warm the cold bath. Similarly a single trained teacher will not be effective in making all the staff members enthusiastic and motivated to start using the CtC approach.

Here it is proposed that if out-of-school workshops are analogised as ‘making cups of hot water’, then in contrast, school-based training workshops can be labelled as a ‘Japanese bath’ model. Normally a water heating system is attached to a Japanese bath, and therefore, a bath of cold water is warmed up evenly and all together. In a bath, the warmed water will naturally cool with time, which is similar to the ‘natural death’ of the programme. However, with a Japanese bath, it is possible to control the temperature with small inputs of heat from the water heating system. Such a re-heating system is equivalent to follow up workshops, monitoring and positive feedback, which keeps ‘the spirits high’.

Ideally, the ‘re-heating system’ should be established in each school and also at each zone level, so that re-heating can be done whenever necessary without depending on resources from the outside of schools or zones. This enhances sustainability.

Such a ‘re-heating system’ includes strong leadership from head teachers, self-generating and sustained incentives such as improvement in children’s performances and behaviours and parents’ appreciation. Shaeffer (1994) also emphasises the importance of non-monetary incentives for implementers of the innovation.

To apply the ‘Japanese bath’ model, the following steps would need to be considered.

- i.* In each zone, DEO should identify a few innovative teachers as CtC zone co-ordinators.
- ii.* In each district, all the zone co-ordinators are trained as resource people. They need be given time to practice CtC applications at their schools and learn through trials and errors.
- iii.* In each zone, once these resource people are competent to use the CtC approach, they organise school-based workshops in all the schools.

- iv. In each school, innovative teachers, who are likely to become resource teachers in the schools, are appointed as CtC school co-ordinators.
- v. After the workshops, head teachers with CtC school co-ordinators should report the progress of the programme to zone co-ordinators.
- vi. Zone co-ordinators should identify active schools and less-active schools, then provide training, with more efforts oriented towards less active schools.
- vii. Less active schools need further school-based training by the zone co-ordinators or innovative CtC school co-ordinators in neighbouring active schools.
- viii. Annually, every school tries to organise a school-based workshop, conducted by CtC school co-ordinators inside the school. These activities should be reported to the zone co-ordinators who pass these reports to DEOs.
- ix. DEOs write acknowledgement letters to schools, which are actively involved with the programme.

One of the key points of this model is that zone co-ordinators need to be appropriately selected and sufficiently trained to become resource people. This model applies the concept of positive discrimination towards less active schools, which are likely to have weak leadership from head teachers and fewer innovative teachers. With these schools, it is difficult to establish a ‘Japanese bath’ system inside the schools, therefore, zone co-ordinators act as an external re-heating system. Through such positive discriminations, marginalised schools are not left further behind.

One of the problems of this model is that even for innovative teachers, several school based training workshops may be required to understand and apply the CtC approach. Also not all the schools have innovative teachers or enthusiastic head teachers. In addition, travelling to each school in a zone requires funds and establishing the ‘re-heating system’ takes time.

10.6.2 Unbalanced growth model

The “unbalanced growth model”, suggested by Elmore (1996) and observed in Case study 1, has proven to be effective. As is discussed in Chapter 3, the unbalanced growth model involves concentrating a critical mass of talented teachers in a few schools. These schools are designed to serve as places where new practices are developed and passed to other colleagues. Over the time, these schools would be deliberately staffed with larger

proportions of new teachers who would be exposed to the norms of good practice. Kabale School in Case Study 1 exemplifies this unbalanced growth model with resource teachers, Kangwa, Mumba and Mumbo.

This model of ‘unbalanced growth’ was created when the director of a local NGO, involved with promoting the CtC programme, instigated the deliberate transfer of an enthusiastic teacher to assist another innovative teacher. Thus enhancing the ability of both teachers to act more fully as key resource people. This kind of a deliberate transfer of resource teachers is a valuable example of creating a critical mass in one school and was effective in developing activities and creating an institutional memory.

This core of innovative teachers all working in the same school provided a base for other teachers to opt in. As a result, the majority of teachers in this school now utilise the approach in their classroom. Newly transferred teachers to Kabale receive some support from other colleagues on understanding and using the CtC approach. Subsequently, even if these three resource teachers are transferred to other schools, Kabale School is likely to continue their CtC activities.

To implement this unbalanced model, the following steps would be useful.

- i. PEOs and DEOs would need to identify resource people.
- ii. PEO and DEO concentrate a few of them to create a critical mass in each model school by deliberate transfers.
- iii. Resource people, who are preferably innovative teachers themselves, provide school-based workshops involving all the staff members in the model schools on the CtC approach.
- iv. Innovative teachers in the school are encouraged to apply and evolve the concept in their teaching. They are also encouraged to work closely with other colleagues to transfer their knowledge and skills through personal interactions and mentoring.
- v. Other colleagues can learn practical applications in the classroom by observing these resource teachers and receiving guidance on a daily basis.
- vi. Improvements in pupils’ performances in these model schools could be expected and realising these would provide demands from parents in neighbouring schools to opt in.

- vii. Gradually the MOE can create more of such model schools in different regions of the country until all the teachers in all schools understand and apply the approach.

This is a long process, which requires the systematic identification and transfer of self-motivated teachers. As Gibbs (1997) points out, “the introduction and spread of innovative ideas is a very slow process and programmes which aim to make a significant impact on classroom behaviour take time”(3.4). He states that

“Child-to-Child has been in Mpika for 10 years. The development of a consensus within the school based on Child to Child principles has taken 10 years time. The development of individual models of classroom innovation and the spread of ideas from teacher to teacher and class to class has taken 5 years” (Gibbs 1997, 3.4).

Moreover, in this case, it was teachers’ spontaneous interests, which made teachers adopt the CtC approach into their teaching. For example, a few teachers such as Miyandale and Mulenga approached Mumbo and Kangwa to learn how to use the CtC approaches in their classrooms. Such demand-driven actions made the practices more sustainable.

10.6.3 Cumulative growth model using the TTCs

Another relevant model is an application of the “cumulative growth model”(Elmore 1996) using teacher training colleges. With this model,

“it involves not only creating interventions that expose teachers to new practices, but also monitoring the effects of these interventions on teaching practice” (Elmore 1996, p.21)

Case study 2 observed a teacher training college that provided support to five neighbouring primary schools as pilots for educational change. It was expected that gradually other primary schools would see these pilots and opt in to the programme. However, there were several obstructive problems, especially with training the lecturers in TTCs and teachers in schools. By applying the cumulative model and rectifying the problems observed in Case study 2, the following steps may be useful.

- i. Resource teachers, preferably people who have actually used the approach in their teaching in Zambia should train all the lecturers in each TTC. All the lecturers should be encouraged to use the approach in their teaching.

- ii. The TTC should choose pilot schools carefully, ensuring that supportive head teachers are in place. It would be preferable for college students to have teaching practice in these schools, so that there are constant contacts between the college and schools, without requiring extra funds.
- iii. The TTC lecturers provide school-based workshops involving all the staff members in schools. Schools should share some costs, which would enhance their responsibility to, and ownership of the programme.
- iv. The college lecturers observe teachers' lessons and have regular discussions to improve their teaching.
- v. Within a primary school, if a few enthusiastic teachers have started to apply the CtC approach in their teaching, the college and the head teacher should encourage them to demonstrate the applications and to mentor their colleagues.
- vi. Once some teachers in the pilot schools have mastered new teaching practices, the DEO should identify some innovative teachers from these pilots and facilitate them to lead school based workshops for other schools nearby.
- vii. The DEO should facilitate these resource teachers from these schools to organise school-based workshops in other schools further afield within the same district.
- viii. The PEO should facilitate these resource teachers to organise school-based workshops in other schools in other districts. The DEO should choose CtC district and zone co-ordinators from talented teachers.
- ix. A system of reporting CtC activities from schools to the DEOs and sending feedback and acknowledgement letters back to schools should be established. Also in each school, a support system of monitoring and mentoring among teachers should be established.
- x. Over the years, the number of schools receiving such school-based workshops should gradually be increased, while the TTC and original pilot schools take efforts to maintain the collaboration mechanism between them.

One of the problems of this model is that it can take a long time for all the lectures to start using the CtC approach in their teaching. Also TTC lecturers do not always have a good understanding of primary school teachers' realities and problems, consequently, these problems may not be addressed in the workshops. Only schools nearby a TTC can

receive such support from the TTC and these schools are likely to be in urban or semi-urban areas. The remotest and the most needy schools are likely to receive the least support and will inevitably be the last to receive it.

Also it is not easy to establish a system of mentoring teachers inside a school, unless that school has an enthusiastic head and a few talented teachers. It requires a local mechanism monitoring and supporting all the schools, which should not require a large funds and transport. It also requires funding for resource people to travel to schools.

10.7 Conclusion

This chapter summarised the main findings, together with enabling factors and constraints for scaling up the CtC programme from the three case studies. All the three cases show that key individuals' roles were significant in promoting the CtC approach. Also out-of-school training workshops had some positive impact on schools. However, school based workshops appear to be considerably more effective, allowing a more comprehensive understanding of the CtC approach to be disseminated with less information distortion whilst creating ownership among all the staff in a way that avoids the development of personal jealousies.

The support from external donors to fund training has been helpful in establishing small scale innovations, however, Case Study 1 showed that depending on such funds is not sustainable. The government cannot provide sufficient funds for further training workshops or provide financial incentives due to the declining economy. Therefore, to create a sustainable programme it is useful to utilise the CtC concept-mastered teachers to spread the innovation and to mentor their colleagues at their schools. Also improvements in students' performance , positive feedback, parents' appreciation and recognition from the DEOs would be a realistic and effective form of incentives for teachers.

Three main lessons on scaling up educational change using the CtC approach are drawn from the empirical work. First, educational change needs to rely on the personal commitments and enthusiasms of innovative teachers. Second, the majority of teachers are more likely to apply the CtC approach through direct observations of CtC applications and personal interactions with these innovative teachers, than from one-off out-of-school training workshops. Third, school based workshops appear to create more

ownership and minimise information distortion while discouraging personal jealousies than out-of-school workshops.

These lessons are taken into account and three potential relevant models are proposed. These models are (1) 'Japanese bath' model, (2) 'unbalanced growth' model and (3) 'cumulative growth' model.

With a 'Japanese bath' model, the emphasis was on creating a 'heating system' in each school and each zone. All the staff members are 'warmed up' all together and evenly. Also it tries to sustain the programme through monitoring, self-generating incentives and further re-orientation workshops at each school. Once a head teacher and innovative teachers in a school install the 'heating system', the programme is more likely to be sustainable.

In the 'unbalanced growth' model, creating a critical mass of enthusiastic and talented teachers in one school by deliberate transfers is essential. These innovative teachers are encouraged to apply and evolve the concept in their teaching. They are then encouraged to work closely with other colleagues to transfer their knowledge and skills through personal interactions and mentoring. Other colleagues can observe practical applications in the classroom by these resource teachers and receive guidance on a daily basis. It is a slow process, however it can effect a qualitative change in teachers methods.

Another potential model is the "cumulative model" (Elmore 1996), which is a modification of the model observed in case study 2 using the TTCs. With this model, all training should be college-based and school-based, involving all the staff members. It aims at spreading the CtC approach as teaching methods to colleges and schools with some pilots nearby TTCs. Gradually it increases the number of schools and districts involved while monitoring teachers in those schools that have already received training.

Chapter 11 Conclusion and recommendation: Theory and reality of the Child-to-Child and issues of going to scale

11.1 Introduction

School based health education has become recognised as the key to achievement of both global initiatives of Health for All and Education for All. In particular, practitioners of the CtC approach have expressed their belief that its methods have considerable potential to bring about beneficial change within existing structures. However, many existing interventions using the CtC approach have been successful up to the pilot stage, but have not scaled up beyond (Hubley 1996). Moreover, little research has been done on scaling up educational change. Therefore, at the start of this thesis, I set out to address the question “How can educational change using the Child-to-Child approach go to scale?”

In order to address this central research question, at each stage of the research, I have answered the following sub questions;

- i.* How has the Child-to-Child programme using the Child-to-Child approach in Zambia gone to scale?
- ii.* What are the constraints and enabling factors of going to scale?
- iii.* What are possible effective models of going to scale?

This final chapter summarises the findings in relation to these research questions. The theoretical framework for this work is defined in Chapters 2, 3 and 4. Chapter 2 provides clarity to definitions of health, health education and health promotion, and advantages and difficulties of school health education. Chapter 3 discusses interpretations of ‘going to scale’ or ‘scaling up’ along with associated aspects of change. Chapter 4 examines various aspects of the Child-to-Child approach, which include life long education, active learning and children’s participation. Chapter 4 also raises issues of scaling up in relation to the CtC approach and differentiates scaling up the Child-to-Child programme using the approach from scaling up the concept of the Child-to-Child approach.

Being the only nation that has introduced the CtC approach at the national level in a comprehensive way, Zambia was selected as the subject of this research. The CtC

programme, which aimed at introducing and spreading the CtC approach throughout formal primary schools, was launched in Zambia in 1986. Chapter 6 described the history of the Child-to-Child approach and the CtC programme in Zambia. This chapter also examined the MOE's efforts for scaling up the programme. Case studies as described in Chapters 7 to 9 are used to understand the process of scaling up the CtC programme in three different contexts in Zambia and to identify enabling factors and constraints. These case studies also proposed three potential relevant models of scaling up educational change using the CtC approach in Chapter 10.

This chapter seeks to draw together all the aspects of scaling up educational change described in both the theoretical work and the practical work. Further research areas are discussed and recommendations are offered to donors and local government departments. The first section revisits the working definition of 'scaling up' discussed in Chapter 3. Subsequently, it examines how the CtC programme using the CtC approach in Zambia has scaled up in terms of each of these three aspects of change. It also summarises principal enabling factors and constraints of scaling up that were identified in three case studies in Chapter 7, 8 and 9. The following section revises the potential relevant models of going to scale, which were examined in Chapter 10. Subsequently several recommendations are made to local governments and donors. A critical reflection on the limitations of the study is given. Some issues relating to the CtC approach and going to scale are also discussed.

11.2 Working definition of 'going to scale'

Defining 'scaling up' or 'going to scale' is a complex task as it involves various dimensions. Chapter 3 provided a working definition of 'scaling up' or 'going to scale' as it involves three main aspects of change: system change, quantitative change and qualitative change. Chapter 3 also proposed some of the indicators of scaling up.

- System change concerns structural and legal changes such as the central government approves the innovation, new posts are created and a new curriculum is developed.
- Quantitative change involves increase in numbers, such as the number of schools, students, teachers and also administrative units such as districts and provinces.

- Qualitative change involves behavioural change and improvement of social and physical environments such as better teacher-student relationships and a safer school playground.

This definition of scaling up is applicable to both a project scaling up and an innovative concept scaling up. Chapter 3 demonstrated that when an educational project aims at introducing a new concept, such as a child-centred approach or the Child-to-Child approach, the project and the innovative concept itself scale up in different ways. For example, the project can be introduced nationally, however, the approach would not be applied by all the teachers. In this case, the project has scaled up to all schools, however, the approach has scaled up to a certain proportion of teachers who adopted the approach. Also the concept may permeate into more than one project and even after the original project finishes its term, the concept stays with teachers and students. Chapter 6 observed such different ways of scaling up in relation to the CtC approach and the CtC programme in Zambia. Differentiating what has scaled up according to the three aspects of change provides a useful method to examine educational change using the CtC approach. The following section will discuss how the CtC programme in Zambia has scaled up in each of these aspects.

11.3 Scaling up the Child-to-Child programme in Zambia

The CtC programme has scaled up in all the three dimensions in Zambia. This section summarises what has actually been scaled up in each aspect of change.

11.3.1 System change in the Child-to-Child programme

CtC was originally started as two separate regional initiatives, which gained the government's approval through personal networks of key individuals. Such facilitation is categorised as a "multiplicative strategy" (Edwards and Hulme, 1992, p.16), which achieves impact through deliberate influence, networking, policy and legal reform or training. Havelock and Huberman (1997) classify an innovation through such personal networks and social interactions as "social interaction" (Dalin 1978, p.70). The CtC programme was developed through key individuals' personal contacts and network to achieve a change in the education system.

Also Chapter 6 observed a number of efforts made by the MOE to bring systemic changes, including the establishment of the CtC Directorate in the MOE, development of a new curriculum which introduces health related topics in to most subjects. Teaching and learning materials for CtC In the provincial, district and school levels, CtC co-ordinators were appointed and a various training workshops were organised. These were all significant in scaling up the CtC programme.

However, the MOE could not provide sufficient funds, effective training or feedback to regional CtC co-ordinators and teachers under the declining economy. Thus these systemic changes could not fully benefit teachers and schools. Consequently the CtC programme is most actively implemented in the regions where local NGOs assist the programme and where committed teachers continue the activities, such as in Mpika, Copperbelt and Livingstone.

11.3.2 Quantitative change in the Child-to-Child programme

Under an attempt to bring quantitative change, the key individuals in collaboration with the ICL provided a number of workshops to CtC school co-ordinators in five districts in case study 1. Case study 2 studied that the MOE initially introduced the programme to TTCs. Then each of the TTCs was expected to assist five associate primary schools nearby to start the CtC programme. However, this expectation was not fully achieved. CtC district co-ordinators in case study 3 assisted CtC school co-ordinators through workshops, which were funded by CHEP.

Only a limited number of primary schools in a few regions were facilitated to start the CtC programme by active regional co-ordinators and local NGOs. In other regions, most primary schools were introduced to the programme when the MOE conducted CtC orientation workshops for all the provinces in 1994 (Syamwenya interviewed on 13/5/1998). These workshops involved 40 people per province and 20 people per district. The MOE claimed that at least 20 primary schools in each district were involved in the CtC programme (MOE 1994). Such one-off firework type workshops appeared to result in spreading simple CtC activities in schools. This raises the issue of qualitative change and this will be discussed in the next section.

Case study 2 and 3 demonstrated that the CtC programme also scaled up through non-formal community schools. The DLTTTC has established a community school inside the college as part of the CtC programme. The resource lecturers of the CtC committee mobilised the neighbouring compounds to organise their own community schools. In Copperbelt, a few primary schools have started extending their CtC activities to neighbouring compounds. In these schools, children in the SHGs teach children from compounds. Moreover, key individuals identified within the case studies have been involved with development of SPARK, the curriculum for community schools and working for an NGO supporting community schools. Such an effort to scale up the programme through adding new target groups is classified as ‘additive strategy’ (Edwards and Hulme 1992).

11.3.3 Qualitative change in the Child-to-Child programme

Section 3.8 proposed that several indicators of qualitative change included;

- Whether teachers have changed their methodology in classrooms.
- Whether the school environment has become safer, and children and teachers feel happier to be there.
- Whether children have become more collaborative and gained more confidence.
- Whether the CtC activities have changed from a simpler to more comprehensive applications.

In all three case studies, a number of teachers have started integrating health topics into different subjects. Some teachers in case study 1 and 3, some teachers indicated children improved their academic performances and became collaborative after teachers adopted the CtC approach. For example, as is described in section 7.6 in case study 1, Milandile observed that the children in Mumba’s class were performing well. After learning how to use the CtC approach in her lessons from Mumba, her students’ performances also improved (Milandile interview on 8/6/1998). All of Mumba’s students passed the national examination at the end of the Grade 7 and 37 out of 50 were accepted in the boarding schools (Mumba interviewed on 5/4/1998). Section 9.4 discussed that a CtC zone co-ordinator in Mufulia and her colleagues in case study 3 claimed that parents favour the CtC ‘active’ schools (Pelya, interview on 23/2/1998).

As is discussed in Chapter 6, in Zambia, the CtC approach is regarded as approach not only to health education but also to quality education (Luswata cited in Hawes with

Bonati 1992 p.22). The aspect of ‘children helping other children’ and peer education is highly valued in the Zambian context where there are not enough teachers and a large proportion of children do not have access to schooling. For example, group work described in Case Study 1 and ‘twinning of children’ observed in all Case studies are used both to spread health messages and to teach academic subjects.

A wide range of activities under the CtC programme is observed in Zambia. These activities are from club activities to more comprehensive applications in the classrooms. Some efforts to classify schools according to the CtC school activities were made. For example, Gibbs (1993) developed four stages to classify the schools and Chiwela (1996) modified these stages (Table 6.1). Chiwela argues that 95% of schools are classified as stage 1 (Chiwela 1996). In these schools, the most observed form of the CtC activities is the CtC spearheading group (SHG) children create poems and dramas then present these in front of the school and in the community. Normally one SHG consists of 20 to 40 children and their activities are similar to other clubs. About 1 or 2% of schools have active CtC programmes (Stage 2) and another 1 or 2% have a school based programme that is effective and flourishing (Stage 3 and 4). However, if such criteria are to be used to measure the success of a school’s activities, then it is important that they are communicated when the programme is introduced. Introducing such criteria at a later stage can have a negative effect on teachers’ morale.

In short, the CtC programme scaled up in terms of system change and quantity, however, it has not yet enhanced potential qualitative change in teaching and learning in the majority of primary schools. The way the CtC programme has been introduced to the majority of local educational officers and teachers was through out-of school one-off workshops, which were particularly ineffective in bringing quality.

From the experience of the CtC programme in Zambia, scaling up a simplified interpretation of the CtC approach, such as CtC clubs, appears to be possible through out-of-school cascade-type training workshops. However, spreading more comprehensive interpretations such as integrating health across curriculum and using the CtC approach as teaching and learning methods is a very slow process and thus requires further training and support.

11.4 Main enabling factors for scaling up

In addition to strategies and efforts taken by the MOE, a number of factors, identified in Chapter 7, 8 and 9, contributed to and hinder scaling up the CtC programme in Zambia. Tables 10.2 and 10.3 in Chapter 10 summarised these enabling factors and constraints.

The main enabling factors identified for bringing systemic changes are strong personal networks, the central government's approval and efforts, the CtC co-ordinators' appointments, access to external funds, recognition of active schools and teachers from regional education offices. The main enabling factors for quantitative change are training workshops, supportive head and administrations, relevance to local situations. The main enabling factors for qualitative change are personal commitment and enthusiasm of individuals, creating a critical mass of innovative key people and positive feedback from children and parents. Also case study 2 observed that the schools with enthusiastic CtC co-ordinators and innovative head teachers tend to have active CtC activities without having received a number of training workshops.

Another enabling factor identified in case study 1 is that some committed individuals have evolved the applications and convinced their colleagues to use the CtC approach through personal interactions. This support among teachers in a school will be discussed further in section 11.7. This confirms the social constructivists' view of "people learn best in social settings" (Good & Brophy 1995). This view is widely shared by other studies (Havelock & Huberman 1977, Hargreaves 1992, Fullan 1992, Elmore 1996, Harvey 1998).

These talented teachers who started using the approach earlier than others could be categorised as "early adopters" of innovation (Rogers 1983 p.246). As is discussed in section 3.11 in Chapter 3, they serve as a role model for their peers.

"The role of the early adopter is to decrease uncertainty about a new idea by adopting it, and then conveying a subjective evaluation of the innovation to near-peers by means of interpersonal networks" (Rogers 1983 p.249).

In Kabale School in case study 1, these talented teachers demonstrated successful applications of the approach, such as growth monitoring and group work. Their colleagues observed the improved performances of children. These are more observable

than improvements in health or higher self-esteem of children. As a result, these colleagues were mobilised to use the applications. This also demonstrated that teachers are more likely to learn new teaching methods through direct observation than they are from abstract description (Elmore 1996). The issue of adopting the CtC approach is discussed further in section 11.6.

11.5 Main constraints for scaling up

Several identified constraints for system change are related to the socio-economic problems, such as the long economic crisis, HIV/AIDS epidemic and the lack of capacity throughout the education system. Constraints for quantitative change are ineffective out-of-school training workshops and lack of consistent support from the educational offices. The constraints for qualitative change include personal factors, such as jealousies and discouragement from colleagues, reluctance of teachers to take up new approaches, lack of ownership of the programme and lack of supports from head teachers and administrators. Issues of teacher training will be discussed further in section 11.8. Moreover, the complexity of the CtC concept discussed in Chapter 4 made scaling up the CtC programme difficult to realise and to evaluate.

Scaling up such behavioural change among teachers, therefore, is difficult but critical not only in Zambia, but also in rich countries. For example, Chapter 3 discussed that only 25% of teachers would change their ways of teaching at the peak of reform periods in USA (Elmore 1996). This is a country where teachers do not have to worry about regular payments and teaching and learning materials. In other words, if 25% of teachers in Zambia have changed their ways of teaching as a result of the CtC programme despite all the obstacles, whether it should be evaluated as a 'failure' can be arguable.

11.6 Characteristics of the CtC approach and its adoption

Section 3.11 presented the view that in general, innovations that are perceived by receivers as having greater (1) relative advantage, (2) compatibility, (3) trialability, (4) observability, and (5) less complexity will be adopted more rapidly than other innovations (Rogers 1983 p.16). Considering how the CtC approach can be characterised in these terms reveals why the approach is adopted fairly slowly among Zambian schools and teachers.

11.6.1 Relative advantage

The CtC approach was perceived as having relative advantage initially by some Zambian people in the MOH and expatriates working under Catholic churches at the grass-root level, subsequently by government officials including the president at that time. This enabled systemic change at the central level. Some enthusiastic teachers such as Kangwa and Sabi also saw the advantage of the approach.

However, McLaughlin (interview on 11/2/1998) found that many ordinary teachers regarded the CtC approach as an extra burden. Similarly, as is discussed in section 2.6.4, health education is not perceived as a high priority by many teachers and educational officers, despite the considerable advantages, as discussed in Chapter 2. In general, parents, teachers and even students are more concerned about academic performances and examinations than health education (Kelly interviewed on 16/2/1998). Also better examination results are easier and clearer to recognise than health improvements.

11.6.2 Compatibility

Some underlining concepts of the CtC approach such as children's participation and active learning were not highly compatible with the existing values and past experiences of teachers in Zambia. They are used to didactic ways of teaching with absolute control over children in their classes (McLaughlin interview on 11/2/1998, Kangwa interview on 14/11/1998). Mumba (1996) also argues that

“The CtC method in classrooms has failed to take off effectively in most schools due to its democratic characteristics, as most teachers prefer the traditional teaching to child centred methods. While we envy developments in western countries and import their education systems, we fail to accept the characteristics that accompany such innovation”(p. 5).

However, it is worth noting that in even in western societies, until recently most new concepts such as gender equity, human rights and anti-racism were less compatible. It is natural that it takes time for the majority of people to accept and internalise a new concept, especially that has low compatibility, moreover, taking time does not invalidate it.

On the other hand, the concept of older children looking after younger ones was highly compatible with the existing practice in Zambia, therefore, 'twinning' of older and younger children was adopted in a number of schools.

11.6.3 Trialability

The CtC approach is triable as an extra-curricula club activity for 20 children in a whole school. However, it is not triable as a teaching method for a portion of children in a whole class during a lesson.

11.6.4 Observability

Some applications of the CtC approach such as presenting sketches in the assemblies and cleaning school compounds are more observable than integrating health topics into various subjects and encouraging children to take decisions about health.

11.6.5 Complexity

As is discussed in Chapter 4, the CtC approach is a highly complex concept. Even innovative teachers needed some time to understand it and to start using its applications.

“In general, new ideas that are simpler to understand will be adopted more rapidly than innovations that require the adopter to develop new skills and understandings” (Rogers 1983 p.15).

This reveals why relatively simpler applications such as CtC clubs and CtC school committees were adopted more rapidly and widely than other applications which require educational officials' and teachers' attitudinal and behavioural change towards children and new skills.

In short, it is natural the adoption of CtC approach as teaching methods by teachers takes a long time. It would be important to clarify and advertise the advantages of using the CtC approach extracted from teachers' and children's experiences in Zambia. It is also valuable to examine which elements of the approach are more compatible and how less compatible elements can be adopted. It may be also necessary to reduce the complexity of the concept by clearly defining objectives and concrete applications which teachers should aim at.

11.7 The roles of the government and the NGOs in scaling up the CtC programme

11.7.1 The role of the government

As is discussed in Chapter 6, the Zambian Government has made a number of efforts to initiate and scale up the CtC programme since 1986. Its approval to the programme was essential to the system change, such as establishing the CtC Directorate, integrating health topics in different subjects and appointing CtC co-ordinators throughout the hierarchy. Its approval also encouraged external donors to support the programme at the national scale. Case study 2 demonstrated such top down government and donor support to all the TTCs in Zambia. Since the government is the official deliverer of formal education, its role in the scaling up of the CtC programme has been critical.

However, because of the lack of capacity in the education system and the long lasting economic crisis, the government could not provide sufficient training and resources to educational officers or teachers. As schools and regional education offices are only 'loosely coupled' to the long chain of the hierarchy, they are difficult to reach, both geographically and bureaucratically, with the innovations (Shaeffer 1994 p. S-1).

11.7.2 The role of NGOs

In comparison with the government, NGOs can be more flexible and effective in delivering innovations in regions through INSET training and resources. Also the ICL, the NGO in case study 1, was instrumental in scaling up CtC activities from the local initiatives to the national programme. Case study 3 demonstrated how CHEP, a local NGO, can collaborate with the government system by providing resource and training for the local CtC co-ordinators for a long term. However, case study 1 observed that an NGO could be vulnerable in personnel change and unable to maintain the consistent institutional policy. CHEP maintained its support to the CtC programme through strong leadership of a Catholic sister, who has been the director since 1990 to date.

Case study 1 and 3 demonstrate that NGOs have flexibility to identify key enthusiastic local individuals and support them through further training and/or projects. For example, the innovative teachers in case study 1 have been identified and funded by other NGOs outside of UK to conduct educational projects. Kangwa has been appointed as a project

co-ordinator from 1999 to 2002 for an inclusive education for children with disabilities using the CtC approach, funded by Comic Relief and supported technically by the CtC Trust in London. Mumba has been leading the Classroom Health Materials Project with his colleagues in Kabale and it is funded by Morel Trust. Mumbo was seconded to an NGO working for community schools in Lusaka for two years. However, the government with its bureaucracy and limited budgets has difficulties in supporting those talented individuals as resource people to disseminate the innovation.

Case study 1 and 3 observed that the relationship between the NGOs and the government has been collaborative in scaling up the CtC programme. The government welcomes and encourages NGOs' interventions in in-service training and support to individual teachers and schools for the programme. As Shaeffer (1994) describes,

“Such an innovation would still be national in nature, but would be continually refined and improved as it is developed in various sites and by various actors” (p.S-5).

Especially in the remote and/or marginalised areas, such collaborations are valuable, as international donors' support that normally goes through the central government does not always reach schools in those areas.

11.8 Issues of teacher training for going to scale

11.8.1 Out-of-school workshops and their impact

Most training workshops for introducing the CtC programme to teachers were conducted in out-of-school settings. For example, workshops for CtC school co-ordinators were held at the ICL in case study 1, and workshops for CtC school co-ordinators of five associate schools were organised at the DLTTTC in case study 2. Those out-of-school workshops can be effective in spreading simplified applications of the CtC approach such as clubs and CtC committees. There were teachers who participated in a number of workshops, but did not change the way they teach. On the other hand, some talented teachers became active implementers of the programme after receiving one workshop or even by overhearing about the concept. In short, training workshops do not cause identical impacts on individuals.

These out-of-school workshops only invited a few CtC school co-ordinators from each school, and that often caused information distortion when participants' reciting to colleagues, lack of ownership among colleagues and personal jealousies and discouragement.

A number of individuals mentioned especially about teachers' receiving discouragement from colleagues. Some negative remarks on out-of-schools and personal discouragement were noted during the interviews with key individuals and CtC school co-ordinators. Some of these remarks from three case studies are as follows;

“In the schools, there were many teachers who wanted to attend the training. People who were left out were resentful of those participating. This caused difficulties for the participants in transferring the knowledge to their colleagues” (Carey, interviewed on 2/11/1998).

“We should have involved all the staff members, as the CtC concerns all the children and all the teachers. If we had involved all, then at least, they did not think it was a club. Even in the college, some lecturers thought it was a club, so they were nothing to do with it” (Kasaro interviewed on 19/11/1998)

“If you pick up one teacher from each school and hold a seminar at the district level, the information is not disseminated. That kind of cascade system is distorting the message. Also it does not create the ownership of the programme for other teachers. We conducted such seminars in the past, but most teachers did not get the real concept of the CtC as methods. It is better to give the first hand information to all the teachers rather than the second or third hand information” (Sabi, interviewed on 15/11/1998).

A CtC school co-ordinator who attended training workshops in the DLTTTC lost her self-motivation because of the fact that her colleagues thought CtC activities were solely her responsibility (Akayombokwa, interviewed on 20/3/1998)

Moreover, in Zambia, such workshops normally provide good meals, tea, stationery and daily allowances. These additional benefits for participants create more jealousies and conflicts among teachers. Also, these additional costs also make workshops expensive.

In addition, as is observed in case study 1, staff turn over rate is so high that only one CtC school co-ordinator, who received the ICL workshops among nine schools still remained in the same school, and other trained co-ordinators were transferred, retired or

died. Some of these workshops passed abstractive ideas about the CtC approach, but not tangible applications which teachers can immediately use (Mumba interviewed on 5/4/1998, Kasaro interviewed on 19/11/1998).

These problems of in-service training and education (INSET) in the out-of-school setting are also appreciated by the Department of Education and Science (DES) in UK as follows;

“However, neither good management, a good course, or the motivation of the participants is, in isolation, a sufficient condition for INSET to have an impact. There is evidence that highly motivated teachers can take back something valuable from an indifferent course, just as there are very stimulating courses which leave certain participants quite unmoved. The influence of a good course well matched to participants’ needs may be frustrated by resistance or apathy within the school when the recently be motivated teacher returns. Or, when all the factors for successful impact seem to be present, good quality INSET in certain authorities may run into the sand because of high staff turnover” (DES 1991, cited in Burgess R. & Connor J. et al 1993, p.168).

Thus, these problems related with INSET are observed not only in Zambia, but also in rich western world.

11.8.2 School based workshops

To rectify the problems described in the former section, school-based workshops involving all the staff members can avoid personal jealousies, information distortion and create ownership of the programme. In Mufulira District in case study 3, as the district and zone co-ordinators recognised that school-based workshops are more effective than cascade-type workshops, they have concentrated on school-based workshops since 1997. The district also opened the CtC bank account and schools are sharing some expenses for the workshops (Lubinda interviewed on 16/11/1998).

Section 7.6.3 described CtC school-based workshops in case study 1. During these workshops, participants actually simulated some lessons using the CtC approach in front of children and other teachers. After each lesson, other teachers and resource people provided some comments and feedback to the teacher. Such workshops appear to be effective in creating a collaborating atmosphere to acquire new skills. In addition, as the

participants practised grouping and twinning of children during the seminar, they became more confident in applying these in their classes (Kangwa, interviewed on 31/3/1998).

The benefits of the school-based workshops described above support Dalin's (1994) findings. The 'How Schools Improve' Project (Dalin 1994), which studies three innovative primary education improvement projects, identifies seven "factors that work at a school level". One of these factors is;

"Assistance, usually defined as in-service teacher training, is a key determinant for teacher mastery, and teacher mastery is a key variable for the understanding of improved classroom practice in all three countries. Assistance works best when it is concrete, locally available, regular and on-going, linked to practice, provides opportunities to practice new behaviours and is supported by a climate of co-operation"(p.xiii).

The following section will discuss how assistance for teachers can be "locally available, regular and on-going" in a school setting.

11.8.3 Collaborative and on-going support among teachers in a school

The teachers in Kabale School in case study 1 demonstrated how innovative teachers could provide on-going support for their colleagues through personal interactions. For example, Mumba invited Mulenga and Milandile to his class to observe actual CtC applications. After Mulenga and Milandile tried the applications in their lessons, they came back to Mumba to discuss methods for further improvement (Mumba interviewed on 15/11/1998). Subsequently Mulenga and Milandile became resource teachers and started supporting other teachers through personal interactions.

Beeby (1986) also emphasises the importance of such continuous supporting mechanisms for teachers.

"If a large innovative project is to succeed with the average and below-average teacher, the initial period of in-service training must be followed by systematic, continuing advisory services to teachers in their own classrooms. This must be done not for months, but gradually for several years. It is expensive and involves teams of visiting subject specialists as well as the normal inspectors. If a country cannot afford such a follow-up service to achieve a radical advance in teaching methods, it should consider a less ambitious form of change. Skimping in follow-up services is the most common and, in the end, the most wasteful reason that large projects fail" (p.40).

It is, therefore, important to create a continuous supporting system for teachers, which enables teachers to observe CtC applications and to discuss with resource teachers after trials and errors.

The following section will discuss existing training models of a large INSET programme in Zambia.

11.8.4 Teacher training models of Action to Improve English, Mathematics and Science (AIEMS)

As is described in section 6.4.2, AIEMS aims at improving the quality of teaching and learning of English, mathematics and science through a newly structured in-service teacher training. It introduces 7 different modules (Chapter 6). AIEMS uses three different approaches of INSET, namely, (1) the cascade model, (2) teachers resource centres and (3) school based workshops.

(1) The cascade model

The workshops are cascaded from national to provincial level, and to district, then to zone and finally to school levels. This model is useful to provide uniformity throughout the system. However, Gibbs (1998) argues that a cascade model is effectiveness if the purpose and objectives of each step in the cascade are the same. Although within AIEMS, the top and middle levels of the cascade share the common purpose of preparing participants to conduct a similar workshop for the next level down. However, in the final stages at the school level,

“the purpose of the workshop is to instigate teachers groups which have multiplicity of tasks depending on the modules. These teachers’ groups, and the content or process which they are expected to implement have not been modelled in any of the previous steps in the cascade and consequently, there is much confusion” (Gibbs 1998 2.4).

The same problem was shared in the CtC programme, in addition to the problems described in the former section.

(2) Workshops at teacher resource centres

AIEMS established 14 provincial resource centres and 57 district resource centres for supporting teachers through facilities and INSET. However, Gibbs (1998) argues that

these resource centres are too small to conduct workshops within a cascade model, and other workshops are mostly school-based. As a result, “as training centres, Teacher Resource Centres are not essential to the Cascade/school based strategy adopted by AIEMS”(Gibbs 1998 4.21).

(3) School based workshops

Gibbs (1998) reports that “school-based workshops have been one of the clear successes of AIEMS”(p.3). He found that as a result of AIEMS, schools started holding school-based workshops and some policy changes were found towards gender equity. Some teaching and learning materials are created as well.

11.9 Potential relevant models of going to scale

The three case studies demonstrated the following three significant issues in order to scale up the CtC programme using the CtC approach.

- iv. Harnessing the personal commitments and enthusiasm of innovative teachers and lecturers is an important necessity for sustainable scaling up the CtC programme using the CtC approach in Zambia. They are likely to have readiness to try the new ideas in their teaching and to help their colleagues.
- v. The majority of teachers are more likely to comprehend the CtC applications through observations of practical applications and personal interactions with the innovative colleagues.
- vi. School-based workshops appear to be more effective in creating ownership of the programme and in avoiding information distortion and personal jealousies among teachers than out-of-school workshops.

These issues were taken into account when three models for achieving scaling up educational change using the CtC approach were considered. These models are the “Japanese bath model” and the modifications of “unbalanced growth model” and “cumulative growth model” (Elmore 1996) which appear to be relevant in Zambia. The relevance of these models together with their disadvantages were discussed in Chapter 10 and summarised in the following sections.

There are also problems with school based workshops using the innovative teachers, these are as follows. First, it takes a much longer time to disseminate information to a number of schools than through out-of-school workshops. Second, identification of innovative teachers is not a simple task for local educational officers. Third, even if innovative teachers are identified, it may not be easy for the government bureaucracy to promote them as resource people to conduct workshops.

11.9.1 'Japanese bath' model

Chapter 10 suggested that an analogy could be drawn between the out-of-school workshops and “cups of hot water”. The workshop participants were expected to understand the concept immediately and to train their colleagues in their respective schools. Such expectations are similar to expecting that addition of a cup of hot water would warm a cold bath.

By contrast, school-based training workshops may be thought of as a ‘Japanese bath’. A Japanese bath has a water heating system and so a bath of cold water is warmed up evenly and all together. It is also possible to reheat the water later again. Such a re-heating system is equivalent to continuous support from colleagues, follow up workshops, monitoring and positive feedback from children, parents and a local educational office.

Ideally such a ‘re-heating system’ is established in each school and in each zone, and schools, which do not have enthusiastic head teachers and innovative teachers should be supported more than other schools by zone co-ordinators. Through such positive discriminations, marginalised schools are not left further behind. Chapter 10 also proposed a number of steps in that should be considered if trying to apply this model in practice.

11.9.2 Unbalanced growth model

The unbalanced model involves concentrating a critical mass of relatively high performing teachers in a few schools. These schools are designed to serve as places where new practices are developed and passed to other colleagues. Over time, these schools would be deliberately staffed with larger proportions of new teachers who would be exposed to the norms of good practice.

Kabale School in case study 1 has proved that the unbalanced growth model is effective. Three innovative teachers created a critical mass in Kabale and their practices and personal interactions enabled other teachers to master CtC applications in the classroom level. Such personal interactions and mentoring are significant for teachers' behavioural change (Harvey 1999).

To utilise this unbalanced growth model to introduce the CtC approach to primary schools, a series of steps were suggested in Section 10.6.1. However, scaling up an innovation using this model is a long process, as the introduction and spread of innovative ideas take time (Gibbs 1997). Moreover, systematic identification and transfer of talented teachers is difficult, especially for the MOE, which has little managerial capacity. Also the gap of education quality between those schools which receive innovative teachers and the others widens further, which would not be acceptable by local educational offices, teachers, parents or children.

11.9.3 Cumulative growth model using TTCs

Another relevant model is an application of the “cumulative growth model” (Elmore 1996) using the teacher training colleges. With this model, teachers are not only trained but also monitored and supported. This model is proposed to rectify problems observed in Case study 2 in which TTCs were used for promoting the CtC programme. In Case study 2, it was expected that gradually other primary schools would see these pilots and opt in to the programme and that graduates of the TTCs would utilise the CtC approach in their teaching. However, the way training was conducted in the TTC was problematic.

This model emphasises that all the TTC lecturers should be trained to use the CtC approach in their teaching, so that students in the TTCs are more likely to understand and use the approach. Also pilot schools should receive not only school-based training, but also monitoring and feedback from the TTCs. Also some innovative teachers in the pilot schools should be identified as resource teachers and help other schools to start using the CtC approach in their schools.

One of the main problems of this model is that it can take a long time for the majority of lecturers to start using the CtC approach in their teaching. The expansion of the programme from pilots to other schools needs to be a carefully managed process. Also

after training, a local mechanism for monitoring and supporting all the schools is necessary to maintain the systemic changes and ensure that the quantity and quality are also sustained. For such a mechanism to be sustainable, it should not require a large fund.

In Zambia, since the approach has already been introduced in to most schools, it would be useful to use the innovative CtC School co-ordinators identified in Chiwela's evaluation (1996) as resource persons. These innovative teachers can conduct school-based training in neighbouring schools. In Zambia, workshops with daily allowances and lunch often created jealousies among non-participants and required large costs for the workshop organisers. Therefore, school-based workshops without daily allowance for participants would reduce the workshop cost significantly and by organising them, the schools have more ownership of the workshops and the approach.

11.10 Recommendations to donors and the central government in Zambia

11.10.1 Clarification of objectives of the Child-to-Child programme

As is examined in section 11.6, the concept of the CtC approach is highly complex, clarifying objectives of the CtC programme would reduce its complexity and consequently, encourage teachers to adopt it.

The evaluation of the CtC programme in 1997 indicated that that 95% of schools were classified as Stage 1 while only 1 or 2 % of schools were in Stage 3 and 4. If the criteria of Stage 3 and 4 are the ultimate objectives which all teachers and schools should aim at in the CtC programme, these criteria should be explicitly advocated and informed to teachers at the outset. Training needs to be organised in order to achieve these. The three case studies demonstrated such objectives were not clearly communicated to most teachers and college lecturers. Also as previously highlighted, the process of training was also problematic.

11.10.2 School based training workshops

This research found that school-based training workshops appeared to be more effective than out-of-school workshops, in order to create ownership among all the staff members and to avoid information distortion and personal jealousies.

Also as section 7.6.3 (vi) described, school-based workshops in the classroom setting enable teachers to understand the approach more easily than abstract descriptions of the concept. Ideally, innovative teachers should be used as facilitators and mentors. As these innovative teachers know the difficulties and benefits of using the new methods from their own experiences they will be more convincing to others.

11.10.3 Full utilisation of existing materials

Observations of the usage of resource materials in schools in Zambia indicated that these materials were often to be found in head teachers' cupboards or libraries. Material for health education was often considered to be only for use in home economics classes. For materials to be fully utilised, clear instructions and/or training need to be provided alongside the distribution.

11.10.4 Documentation and advocacy of successful CtC school applications

Despite a number of difficulties, several schools have managed to achieve and now practise comprehensive CtC activities and with positive impacts for both children and teachers. Such good applications in schools should be fully documented and the information disseminated to other schools. The rationale behind such documentation is that even committed teachers have had difficulties in learning how to apply the CtC approach in their classrooms and that teachers tend to utilise the examples that are feasible and practised by their colleagues. The current project on the development of lesson plans using the CtC approach at Kabale School exemplifies preparation and dissemination of such practical applications to teachers. Such documents generated by Zambian teachers based on their practical experiences are likely to be more popular and successful than resource materials, which do not take into account the local situations.

In addition, all case studies demonstrated that children in schools using the CtC approach have improved their academic performances and behaviours at home. Although

improving academic performances is not the prime objective of the CtC approach, it is an interest of all the stakeholders. Thus advocating such benefits would motivate stakeholders to start using the approach.

11.10.5 Continuous monitoring and feedback

If the objectives of the CtC programme using the CtC approach are clarified, as is discussed in section 11.10.1, the progress in the school level can be monitored and evaluated according to these objectives. Even if the central government and donors cannot provide financial resources for provincial and district co-ordinators to monitor individual schools' activities, they can establish a feedback system through correspondence. School CtC co-ordinators can monitor the CtC activities in the school and write term or annual reports to district co-ordinators. In return, the district co-ordinator can provide feedback and acknowledgement letters to schools. Monitoring and evaluation can take place within a school by teachers and children themselves. Also positive outcomes such as children's behavioural change and improvements in performance and parents' appreciation are important feedback and incentives for teachers.

11.11 A critical reflection on this study

This study examined how the CtC approach in Zambia has scaled up under three aspects of change. It also identified enabling factors and constraints for scaling up through three case studies. Although it has succeeded in describing the over all scaling up process in Zambia, effective strategies for teachers' behavioural change still need to be explored further. This includes effective models of INSET, choice of trainers, types and contents of training and sustainable financial resources.

To have achieved this objective, it would have been useful to concentrate on several innovative schools, rather than regions and to study why teachers in these schools started using the approach in comprehensive ways. Also the regions I chose for case studies are far apart. Mpika was 700 Km North East of Lusaka, Kitwe, Copperbelt was about 250 Km North of Lusaka, and Livingstone was 500 Km South of Lusaka. Organising transport and other logistics took a lot of time and energy in the field. I hoped that these case studies with different key organisations and geographical areas would describe a

holistic picture of the CtC programme in Zambia. However, choosing one case study where some interventions was made by either an NGO or a TTC and comparing with a control area would have similarly provided valuable findings about schools without extra external support and allowed more effective use of resources.

In all case studies, the discussions I had with teachers who were CtC committee members were always with the school's head teacher present. Also in all schools, I was accompanied by the CtC district co-ordinator in the region. The presence of the head teacher and district co-ordinator may have influenced how teachers answered my questions. Also all interviews were carried out in English, which was the second language for all of us. This limited the depth of communications.

In addition, although the CtC approach is based on a belief that children can be trusted and empowered as partners of health promotion, my focus was rather on the education system as a whole and the development of the CtC programme. Consequently I interviewed children only several times.

This research found the significance of teachers' behavioural change in scaling up the CtC programme, and there is vast amount of literature on teachers' development and training. However, the focus of this study is not solely on teachers, as a consequence, the review of literature on this area is limited.

11.12 Further issues of innovative approaches and going to scale

Several further issues concerning the CtC approach and of educational change going to scale have been identified. Some of these issues are discussed in this study, however, require further studies. Five of them are as follows;

- Non-replicability of personalities and commitments of innovative teachers and involvement of other teachers
- Characteristics of innovative teachers
- Diversified interpretations of the CtC approach and quality assurance
- Issues of evaluation
- 'Benign viruses' of the CtC programme

11.12.1 Non-replicability of personalities and commitments of innovative teachers and involvement of other teachers

This research confirmed Hubley's (1996) findings that most of the CtC projects' successes are often due to the enthusiasm and commitment of the researchers and teachers (p.72). In general, at the school level, those committed teachers are genuinely interested in quality education. As a result, they carry on using their time and energy to improve their teaching using CtC. These kinds of commitments and personalities are not replicable. Also resource teachers applications of the concept could be too developed and complicated for other teachers to copy. It is important to learn from and to support such talented teachers, however, the applications would need to be in simplified forms. It is therefore useful to have some 'blue prints' of applications, developed by local teachers based on their experiences. Section 11.8.4 proposed to develop such materials. However, further research is required to learn how to facilitate systematically the majority teachers to take up new teaching methods.

11.12.2 Characteristics of innovative teachers

From the consideration of the findings, this research argues that it is effective to identify and train committed individuals alongside other teachers and to create a system in which these committed teachers will be available to help others on a daily basis after the initial training. This is a fundamental issue in that innovations need to rely on individuals' commitments and talents. However, such commitments and talents are not readily quantified, thus identifying these committed teachers is a difficult task.

The three case studies described each key individual's personal background. This helps to understand main characteristics of innovative Zambian teachers.

- They are genuinely interested in quality education and seeking for improving their teaching and children's learning. These teachers were already enthusiastic and active teachers in schools and had readiness to learn new ideas. For example, Kangwa commented on the CtC approach as follows;

“When I learnt an alternative method like CtC, I thought this was what I needed”(interview on 14/11/1998).

- They believe in their personal abilities and that they can bring changes to improve not only education but also the society they belong to. They recognise their roles for development within the social fabric. For example, Mumba, M'zumara and Syamwenya stated as follows;

“So I could also make a difference in my country and in the teaching profession. Now Zambia is poor and educational quality is going down. But something can be done to make the work easier for the teachers, and to make the learning enjoyable for children so that they are motivated to learn more on their own” (Mumba, interview on 5/4/1998).

“I feel so bad to see children who are disadvantaged. ... Realising what is happening in the society today and how girl children are treated, I thought I should do something about them” (M'zumara interviewed on 18/11/1998).

“I value new ideas and instrument for change. You can make a difference in some ways in the life conditions yourself. ... I am not conservative. But for others, sometimes it is difficult to accept the change and new concepts”(Syamwenya interview on 13/5/1998).

- They are ready to sacrifice their own time and energy for what they believe in without being driven by external incentives. For example, Syamwenya and M'zumara carried out the pilot course for gender education after their normal working hours without any incentives. Also Kangwa continued supporting teachers after Carry left the ICL despite new ICL directors' not always being supportive to the programme.

These enthusiastic teachers' characteristics identified in the case studies support Elmore's (1996) findings as follows;

“They are usually willing to invest large amount of their own time in learning new ways to think about their practice and in the messy and time-consuming work of getting others to cooperate in changing their practice. And, perhaps most importantly, they see their own practice in a broader social context, and see certain parts of that social context as having authority over how they practice” (p.12).

Further study is needed to identify such characteristics of enthusiastic teachers and to create a mechanism to support them to be mentors to their colleagues in the schools.

11.12.3 Diversified interpretations of the CtC approach and quality assurance

Hawes (1988) points out that “CtC is a movement based round an idea, an association of people who are committed to that idea, but who perceive it, who disseminate it and who use it as they think fit and proper” (p.7). This flexibility and looseness paradoxically gives the approach both strength and vulnerability.

As is examined in Chapter 4, the flexibility in interpreting the concept into action provides a sense of ownership and allows the concept to be evolved further by practitioners. However, it also creates a danger that very simplified and reduced forms of interpretations could become predominant in the field. Moreover, in formal education, uniformity and standardisation are required by quality assurance mechanisms such as national examinations or curriculum. The diversity of applications, therefore, might be difficult to be absorbed into such uniform systems. There is a critical tension between diversity of activities with a sense of ownership and the uniformity required by the standardised education system with quality assurance.

The tension between diversity of activities and the uniformity with quality assurance is common in introducing innovative concepts at scale. The question here is what are the minimum components without which it is not CtC. Chambers (1995) describes these as “uncompromisables” in relation to participatory approaches. So far there is no such list of “uncompromisables” of CtC or participatory approaches.

Such a list of “uncompromisables” could be prepared for a specific programme or project using the CtC approach. These would help clarify the objectives and could be employed to evaluate the progress of a programme. They would also assist in defining how to scale up.

The danger of having such a list is that it loses the flexibility of the approach. However, the danger of not having it is that any interpretation can be called as CtC that raises the question of quality assurance again. This is why it is valuable to differentiate scaling up “the programme using the CtC approach” from scaling up “the CtC approach”.

11.12.4 Issues of evaluation

Section 6.4.3 examined the difficulties in evaluating the CtC programme in Zambia. First, the programme objectives were not clear, therefore, it was difficult to evaluate the success or failure. Second, it is difficult to choose evaluative methods, such as questions of questionnaires, the time of introducing the development stages of the CtC, definitions of stages and estimated percentages of stages.

If teachers are required to change the way they teach in the classroom under the CtC programme, there is a need to evaluate quality of training as well as impact of the training on classroom practice. Section 11.8 discussed problems of INSET. In addition, evaluating INSET on classroom practice is problematic.

“However, it is not just research and evaluation instruments that are problematic. A major issue concerns the way key concepts are defined as this will influence the ways in which researchers and evaluators operationalize their questions. First there is a problem of defining what is meant by ‘classroom practice’. This is soon followed by questions such as impact on whom? and effectiveness of what?” (Burgess & Conner et al 1993 p.169)

Further research is required on these issues of evaluation of educational change and INSET in general and how to evaluate educational change using the CtC approach and its scaling up. Evaluating impact of educational projects using participatory approaches is discussed comprehensively at the Forum of Impact Studies, organised by DFID in 1998 (McKay, V & Treffgarne C. Ed., 1998). Such studies are useful to examine how to evaluate as well as who should evaluate innovative educational projects.

11.12.5 ‘Benign viruses’ of the CtC programme

“The total gain to poor people may be much greater through initiating and supporting small changes in large organisations and programmes than through big gain in small organisations and programmes”(Chambers 1995, p.59).

Chambers (1995) argues that scaling up innovative approaches and programmes involve trade-offs and raises acute questions of quality assurance. In relation to participatory approaches, he supports scaling up because the benefits to poor people can be greater from doing imperfectly on a wide scale than from doing better on a small-scale. In going to scale, even when much goes wrong, there may be ‘benign viruses’ derived from

participatory approaches which can remain within large organisations and programmes and then start to take hold and spread (Chambers 1995 p.59). Shaeffer (1994) also argues as follows;

“the success of an innovation should be assessed over time, often many years after the event, when the often more enduring secondary effects or more unanticipated consequences finally emerge” (p.S-4)

This argument would be applicable to scaling up the CtC programme and the approach. ‘Benign viruses’ or ‘the more enduring secondary effects’ introduced by the CtC programme should be studied further. Examining the reason why these ‘benign viruses’ emerge would help understand the process and nature of scaling up educational change using the CtC approach.

In Zambia, such ‘viruses’ appear to include: children are encouraged and trusted as health promoters and participants in development; learning takes place both in schools and communities; and children learn to help each other not only on health matters but also academic subjects. Therefore, although the qualitative change has not been satisfactory according to the evaluations, at least, some invisible and informal gains exist in Zambia.

11.13 Conclusions

This research has provided answers to the research question “how can education change using the CtC approach go to scale?” It defined the term ‘going to scale’ or through a critical literature review. Several enabling factors and constraints of going to scale are also identified through fieldwork in Zambia. Three possible relevant models of scaling up educational change were considered. These factors and constraints are relevant to current situations in Zambia and several findings would be also useful to other situations.

The central government has a significant role in scaling up educational change through policies, curriculum, capacity building, support systems to schools and teachers, examinations and material development. To introduce educational change using the CtC approach, it is important to clarify objectives of the project before implementation and inform these to regional education officers and schools. With government’s limited budgets, it is important to increase the effectiveness of training workshops and the usage

of resource materials. The empirical fieldwork of this research indicated that school based workshops are more effective than out-of-school workshops.

Overall, scaling up educational change using the CtC approach relies on individuals' commitments and enthusiasm. Therefore it is necessary for the educational system to identify and utilise these individuals fully and to create a mechanism where these innovative teachers can influence other teachers by demonstrating practical applications and positive outcomes. These individuals' talents and personalities are non-replicable. This is probably the most significant reason why scaling up educational change which requires teachers' behavioural change is difficult, both in poor and rich countries.

As the concept of the CtC approach is multi-dimensional, clarifying objectives of educational change using the CtC approach is necessary before introducing the programme. This clarification would also help define what to scale up as well as how to scale up. The clarification of objectives would be also useful for monitoring and evaluation the CtC programme.

Appendix A List of Interviews

Carey, F.	interviewed on 2/11/1998
Chiwela, J.	interviewed on 21/11/1997
Chilongo, F	interviewed on 8/6/1998
Gibbs, W	interviewed on 16/3/1998
Harrison, K	interviewed on 3/6/1997
Hawes, H.	interviewed on 24/6/1997, 1/9/1998, 30/6/1999,
Kangwa, P.	interviewed on 24/11/1997, 5/4/1998, 14/11/1998,
Kasaro, I	interviewed on 19/11/1998
Kelly, M.	interviewed on 16/2/1998
Lubinda,	interviewed on 23/2/1998
McLaughlin, E.	interviewed on 11/2/1998
Milambo,	interviewed on 23/2/1998
Milandile, E.	interviewed on 8/6/1998
Mumba, P.	interviewed on 24/11/1997, 5/4/1998, 13/11/1998
Mumbo, C.	interviewed on 28/11/1997, 15/11/1998
Mutukwa	interviewed on 19/3/1998
Muwape A	interviewed on 8/6/1998
M'zumara, M.	interviewed on 13/5/1998, 18/11/1998
Nyelenda, A.	interviewed on 16/11/1998
Sabi, S.	interviewed on 21/2/1998
Sakai, S.	interviewed on 23/7/1997
Syamwenya, C.	interviewed on 13/5/1998, 18/11/1998
Walker, L.	interviewed on 20/2/1998, 16/11/1998
Williams, C.	interviewed, 13/8/1998

Appendix B Meeting list in Zambia

18-29 November 1997 Lusaka and Mpika

Tuesday 18 November 12:30 JICA Zambia Office

Mr. Tsutomu Kobayashi (JOCV Co-ordinator)

Mr. Yoshio Kitamura (JICA Staff, Education) Ms. Yuko Ando (JOCV Co-ordinator)

Wednesday 19 November 8:00 JICA Mr. Mitsuo Ishikawa (Resident Representative)

Mr. Naoki Ando (Staff, Health) Mr. Hideyuki Uo (Staff) Ms. Tomoko Zama Sichone (Senior Clark) Mr. A. Chaponda Daka (Technical Co-operation Secretary) 14:00 Child-to-Child

Directorate Ministry of Education (MOE)

Ms. Martha Chibale (Director) Ms. Fredah C. Chisala (Deputy director)

Thursday 20 November

9:00 UNICEF Mr. Lawalley Cole (Programme Officer) (email) Lawalley_Cole@unicef.zm

Ms. Harriot Miyato (Programme Officer, Education)

Ms. Martha Santos (Programme Officer, Education)

UNICEF P.O. Box 33610 Lusaka Republic of Zambia UNICEF Third and Fourth Floors

UNDP/UNICEF Building Alick Nkhata Avenue Opposite Pop Square Lusaka, Republic of Zambia Telephone: + 260-1- 252.055, 252.364, 252.430, 254.161, 253.621, 252.407, 252.417

Fax (260.1) 253.389 Email Address unicef.lusaka@unicef.zm

1430 UNESCO Office Zambia Mr. Mauno Mbamba (Director)

Cairo Road south end P.O.Box 50591 Lusaka (Tel) +260-1-224481 (Fax) 224474

(Email) lusaka@unesco.org or unesco@zamnet.zm

Friday 21 November

8:20 JICA Mr. Kozo Tsukada (Deputy Resident Representative)

9:00 People Act Foundation

Ms. Jeniffer M. Chiwela (Executive Director)

Permanent House, Wing A, Ground Floor, Cairo Road (Next to Lusaka Hotel)

P.O. Box 33709 (Tel) 231201

13:00 Ms. Peggy Chibuye USAID 250686, 241249, 251711

14:00 AIEMS MOE Mr. Mwale 255235 on the 2nd Floor [Cancelled]

15:00 Ministry of Health/Central Board of Health Haile Selassie Avenue Ms. Gertrude

Mundia (Health Reform Donor co-ordinator) (Tel) 254427 (Fax) 260-1-253173 (email)

gmundia@zamnet.zm [Cancelled]

Saturday 22 November

15:30 Ms. Gertrude Mwape

(Lecturer) Psychology Department, University of Zambia

(email) GMwape@hss.unza.zm (Home Tel) 235162

Sunday 23 November 10:30 Ms. Charlotte Harland MANO Consultancy Services Ltd.

P.O. Box 320015 Wodlands Lusaka (email) <mano@zamnet.zm>

(Tel) +260-1-264248 & 264311 (Fax) 264311 (at work) 263607 (at home).

Monday 24 November

(Travelled from Lusaka to Mpika District, Northern Province)

Appendices

16:30 Mr. Patrick Kangwa (Child-to-Child Co-ordinator) Institute of Christian Leadership (ICL) P.O. Box 450038 Mpika (Tel) 04-370269 (Fax) 04-370112

Tuesday 25 November

8:15 Mpika District Educational Office

Mr. K.V. Mvula (District Education Officer)

Mr. G.D. Simukonde (Education Officer)

Mr. E.M. Ntema (District Inspector of Schools)

Office of the District Education Officer P.O. Box 450144

(Tel) 04-370628 (direct to DEO), 04-370758 (Fax) 04-370628

10:00 Chitulika Basic School

Mr. Emmanuel B. Lupupa (Head teacher) Child-to-Child Committee teachers

P.O. Box 450055 Mpika (Tel) 04-370579

14:00 Mpika Basic School

Mrs. T. Bwalya (Acting head) (Mr. T.. Membwe, Head teacher is on leave)

Teachers in the Child-to-Child Committee P.O. Box 450004 Mpika (Tel) 04-370170

16:00 AIEMS District Resource Centre

Mr. Michael Kalima (AIEMS district co-ordinator)

P.O. Box 450144 Mpika (Tel) 04-370661

19:00 Mr. Paul Mumba (Teacher) Kabale School

Wednesday 26 November

7:15 Kabale Primary School

Mr. Paul Mumba

Ms. Elizabeth Mulenga

8:50 Kaole Middle Basic School

Mr. Albert Simumba (Head Teacher)

P.O. Box 450435

9:30 Munndemwa Middle Basic School

Mr. Zebron Chansa Kalinda (Head Teacher)

Children's sketches P.O. Box 450141

(Travelled from Mpika to Lusaka)

Thursday 27 November

9:30 Mrs. Barbara Chilangwa (Deputy Permanent Secretary, Technical Co-operation)

MOE P.O. Box 50093 (Tel) 01-250162

10:30 Action to Improve English, Mathematics and Science (AIEMS) MOE

Mr. Burney Plant (Inset Development Adviser)

(Tel) 01-250855 ext. 244 (Fax) 255235 (Email) bplant@zamnet.zm

14:30 Curriculum Development Centre 250900 Mr. Miyombo Katengo (Acting Director)

Ms. Mutinta Mweenbe

P.O. Box 50092 Lusaka (Tel) 254848 (Fax) 254087

15:30 Integrated Education Sector Investment Programme (ESIP) Mr. Wilfred M. Kaiba (Programme Co-ordinator)

P.O. Box 50754 Lusaka (Tel) 250581, 250627 (Fax) 250663 (Email) ESIP@zamnet.zm

Friday 28 November

8:30 JICA Mr. Mitsuo Ishikawa (Resident Representative)
Mr. Tetsuta Okada (JOCV Co-ordinator)

10:00 Japanese Embassy

Mr. Yasuhiro Endo (Second Secretary)

No.5218 Haile Selassie Avenue, P.O. Box 34190, Lusaka (Tel) 251555 (Fax) 253488

12:00 UNESCO Office Zambia, Mr. Mauno Mbamba (Director)

13:00 UNICEF Ms. Martha Santos, Mr. Lawalley Cole

Programme for the Advancement of Girls' Education (PAGE)

15:00 Zambia Open Community Schools (ZOCS)

Mr. Clement Mumbo (Education Adviser)

Hope House, Luanshya Road (Yellow gate) (Tel)227084 (Fax)262540
19:00 JICA Mr. Naoki Ando (Staff, Health)

Saturday 29 November

8:40 Ms. Maki Hasegawa

The Institute of Cultural Affairs (ICA) Japan

ICA Zambia P.O. Box 31454 Lusaka (Tel/Fax) 220592 (email) ica zam@zamnet.zm

12:30 Mr. Tsutomu Kobayashi (JOCV Co-ordinator)

Mr. Masahiko Sugiyama, Mr. Tokuda, Mr. Shinji Yamamoto (Senior Volunteers of JOCV, Senior Lecturers) Nkrumah Teacher Training College, P.O. Box 80404, Kabwe (Tel) 05-222047/8 Ms. Tanaka (JOCV Science and Maths teacher, Kabwe)

Meeting List: 18-28 February 1998 Copperbelt Province

18-20 February

UNICEF

Mr. Lawalley Cole (Programme Officer)

Ms. Harriot Miyato (Programme Officer, Education)

Mr. Peter de Vries (Assistant Programme Officer, Education)

UNICEF P.O. Box 33610 Lusaka, Zambia, UNDP/UNICEF Building

Nkhata Avenue Lusaka, Zambia (Tel) + 260-1- 252.055, 252.364, 252.430, 254.161, 253.621, 252.407, 252.417 (Fax) 253.389 (Email) unicef.lusaka@unicef.M'zumara

Wednesday 18 February

Travelled from Lusaka to Kitwe

9:30 Briefing from CHEP

Sanlam Building Oxford Avenue P. O. Box 23567 Kitwe (Tel) 02-222723 (Fax) 229512

Mr. Shaddy Chondoka (Project co-ordinator)

Ms. Theresa Simwanza (Office administrator)

Mr. Alick Nyirenda (Finance officer)

13:30 Observation of Peer educator training at Mindolo Ecumenical Foundation

Ms. Leah Njikho

11 new peer educators Chimwemwe project, CHEP

17:00 Discussions with UNICEF Staff

Thursday 19 February

8:00- Ipusukilo Community School

Appendices

Ms. Helen Mpundu Chipepo (Head teacher/ CHEP staff for women and children)

9:30- CHEP – Commercial Sex Workers meeting
Mr. Alick Nyirenda (CHEP)
15 CSWs in Kitwe

Travel from Kitwe to Ndola

11:00- Chipulukusu Compounds in Ndola/ discussions with Peer educators
11 peer educators in the compound
Observation of the peer educators' activities in the compound

14:30- Discussion with CHEP Research, Monitoring and Evaluation Department
Mr. Godwin Mwiya (co-ordinator)
Ms. Anne Bupe
Ms. Mwaka Siakajompa

16:30- Observation of Fisenge Women Nutrition training
Ms. Helen Mpundu (CHEP)

Friday 20 February

8:00- Matete Primary School P.O. Box 20560 Kitwe (Tel) 225450
CtC Spearheading group children
Ms. Agness Luketa Simeza (District CtC co-ordinator)
Ms. Gertrude Mwenda (School CtC co-ordinator)
Ms. Mary Chimfwembe (School CtC co-ordinator)

Observation of the CtC SHG children teaching out of school children
Observation of 'sports for life'

- CHEP debriefing
Sr. Lynn Walker (CHEP Director)
Mr. Shaddy Chondoka (Project co-ordinator)
Ms. Theresa Simwanza (Office administrator)
Mr. Alick Nyirenda (Finance officer)

- UNICEF staff left for Lusaka

12:00- Meeting with Sr. Lynn Walker on CtC in Copperbelt

Saturday 21 February

Chingola District
10:00 Interview with Mr. Samson Sabi (Chingola CtC District Co-ordinator)
P.O.Box 11015 Chingola / Chibine Middle Basic School P.O. Box 10692 Chingola
with CHEP Staff (In-school youth division)
Mr. John Katongo
Mr. Eddie Mupotola
Mr. Steven Kashiba
Ms. Anita Kambeu
Ms. Sipiwe Ziba

Sunday 22 February

Literature review

Appendices

Monday 23 February

7:30- CHEP Office

Ms. Theresa Simwanza (Office administrator)

Mr. Alick Nyirenda (Finance officer)

8:30 -Mufulira District Education Office

Mr. G. L. Siisii (DEO, Mufulira)

Mr. Mambwe R. Makatulo (Education officer)

Mr. J. Chanda (Inspector of Schools, Mufulira)

9:30 -Mutundu Middle Basic School

P.O. Box 41079 Mufulira

Mr. Lubinda (CtC District Co-ordinator)

Mr. Andrew Msiska (Head teacher)

- Kasumba Middle Basic School

P.O. Box 40463, Mululira (Tel) 411707

Mr. V. J. Mulilo (Deputy Head, CtC school co-ordinator)

Ms. Chalue (CtC school co-ordinator)

- Thangata Middle Basic School

Ms. T. C. K. Lungu (Head teacher)

Ms. J. C. Muma

Ms. E. Mulenga

Ms. J. L. Pelya (Zone Co-ordinator)

- Mufulira Teacher Training College

Ms. Milambo (CtC Co-ordinator)

Tuesday 24 February

Ms. Helen Mpundu Chipepo (CHEP staff for women and children)

Fr. J. Henze (Advisor Inspector, Provincial Education Office, Ndola)

- Chipulukusu Compound

Mr. Fabian Miselo

Mr. Alex Matafwali (Fire brigade P.O. Box 70197 Ndola)

Mr. Boniface Kaonga (P.O. Box 71768 Ndola)

- Community School in the Compound

Sr. Gloria

Observed the school and children's songs

- Sr. Elizabeth

Chinika House P.O. Box 70284, Ndola

Wednesday 25 February

7:00 CHEP Office

8:00 Chingola District Education Office

P.O. Box 10085 (Tel) 312504

Mr. West Loward Silungwe (Education Officer)

Ms. R. M. Mongeza (Inspector of Schools)

Appendices

9:00 Chibwe Middle Basic School

Mr. Samson Sabi (District CtC Co-ordinator/ Deputy Head teacher)

Observed lessons

Ms. L. Nanyangiue (CtC co-ordinator) (Grade 1, Science lesson)

Ms. Chisongo (CtC co-ordinator) (Grade 6, English lesson)

10:30 Mudzabwela Middle Basic School

Mr. January Alfred Mulenga (Deputy Head teacher)

Ms. Lidia Chisenga (Assistant District CtC Co-ordinator)

Observation of the CtC SHG children teaching how to make ORS in the community

11:30 Kasompe Upper Basic School

P.O. Box 10644

Mr. W. Munthali (Head teacher)

Mr. Banda (Deputy Head teacher)

Ms. Mwabe (CtC Co-ordinator)

(CtC activities were confined in assemblies, but school is very clean)

- Kitwe DEO P.O. Box 20560

Ms. A. P. T. Ngula (District Education Officer)

Thursday 26 February

8:00- Kitwe Teacher Training College

Mr. Chishimba (Vice Principal)

- ZATEP Office in the college

10:30 - Chimwemwe Middle Basic School

Mr. Mukuma (Head teacher)

Ms. N. Chama (CtC Co-ordinator)

Ms. Lumamba (CtC committee member)

Ms. Mwandila (CtC committee member)

14:00 -St. Anton Compound

Observation of Matete Primary School CtC Spearheading group children's activities in the compound

Ms. Agness Luketa Shimeza (District CtC co-ordinator)

Ms. Gertrude Mwenda (School CtC co-ordinator)

Ms. Mary Chimfwembe (School CtC co-ordinator)

Friday 27 February

9:00 CHEP Debriefing with Sr. Lynn Walker

Fly back to Lusaka

Case study 2 Meeting List: 18-25 March 1998

Wednesday 18 March

Travelled from Lusaka to Livingstone

- David Livingstone TTC

Briefing

Mr. Christopher Syamwenya (Chairperson of the CtC committee, District CtC co-ordinator)

Appendices

Ms. Ida Kasaro (Provincial CtC co-ordinator)
DL TTC Private Bag 1 Livingstone (Tel) 03-320025 (Fax) 321987

- Provincial Education Office

Ms. Sarah Muhyila (PE Officer)

Ms. Ida Kasaro (CtC Provincial co-ordinator, Inspector of Home Economics)

Mr. Myers H. Mudehda (Principal Inspector of Schools)

Provincial Education Office P.O. Box 60391 Livingstone (Tel) 03-320490

- District Education Office

Mr. Maxwell M. Bbalo (DE Officer)

Mr. P. R. Sakala (District Inspector of Schools)

P. O. Box 60270 Livingstone

Thursday 19 March

- DL TTC

Mr. Bryson J. Chikonkoto (Acting Principal)

- Nalituwe Basic School

Mr. Lubasi Mutukwa (Head teacher)

Ms. Beatrice Chiyesu (Chairperson, Bursaries Committee)

Mr. Daka

Ms. Moomba

Sr. Chanda (Librarian)

P. O. Box 60466, Livingstone

Meeting with 'twinned' children

- Mujala Demonstration School

Ms. R. S. Namuswa (Head Teacher)

Mr. Victor Mutombo (Deputy Head Teacher)

P.O. Box D10 Livingstone (Tel) 03-322490

- Syanalumba Basic School

Mr. K. Siamasamu (CtC committee member)

P.O. Box 60654 Livingstone

- DL TTC CtC Student committee

Focus Group discussion

Friday 20 March

- Namatama Basic School P. O. Box 60522 Livingstone

Ms. G. Imbula (Chairperson CtC)

Ms. Hamoonga (Acting Head teacher)

CtC Spearheading group children

- Syanalumba Basic School

Ms. J. M. Sikwabi (Head teacher)

Ms. J. Siavwapa (CtC Committee member)

Ms. B. M. Kalima (CtC Committee member)

- Christ The King Basic School

Mr. M. Shamuko (Acting Head teacher)

Ms. Monde (CtC Co-ordinator)

Mr. B. Nyambe (Anti AIDS Club Co-ordinator)

Appendices

P. O. Box 60270 Livingstone

- Nansanzu Basic School

Ms. Meamui Akayombokwa (CtC Chairperson)

Ms. C.M. Silumesii

P. O. Box 60072 Livingstone

- Dambwa Basic School

Mr. Choongo

Ms. Lumbia (Acting headteacher)

Ms. Muyangwa Mulala (CtC committee member)

- DL TTC Community school

Mr. Bryson J. Chikonkoto (Principal)

- DL TTC Staff members working on CtC, Street children and Girl children projects)

Mr. Bryson J. Chikonkoto (Principal)

Mr. Dominick Bwanga (Vice Principal)

Ms. Martha M'zumara (Chairperson, Girl child Project)

Mr. Mubita Katanekwa (Chairperson, Street Children)

Ms. Beatrice Kalumba (Secretary, Street Children)

Ms. Peggy Michero (Staff member)

Saturday 21 March

- Mwandi compound

Mr. David Mshondwa (Chairperson, Community School)

Mr. Phiri (Secretary, Community School)

Mr. Christopher Syamwenya (Chairperson CtC DLTTC)

Sunday 22 March

Literature review

Monday 23 March

- Kalomo district

Mr. Martin Simatende (District Education Officer)

8:30 -Muwata Basic School

P. O. Box 62071, Kalomo

Mr. Crispin Mukombo (Deputy Head Teacher)

Mr. Austin Mwanza (CtC Co-ordinator)

10:00 - Goodhope Christian Middle Basic School

P. O. Box 620079 Kalomo

Mr. J. Mimoongwe (Head teacher)

11:30 - Mukwela Primary School

P. O. Box 18 Kalomo

Mr. Sichivula (CtC Co-ordinator)

15:00 -Charles Luwanga TTC

(Tel) 50208

Mr. S. W. Phiri (CtC chairperson)

Tuesday 24 March

9:00 - Sichiyanda Middle Basic School

P. O. Box 650042 Chisekesi

Ms. Georgina Mutaka (Acting Head teacher)

Ms. G. Hamucenje (CtC Co-ordinator)

Mr. Mubala (CtC Committee member)

Ms. L. Mamweene (CtC Committee member)

Observation of the SHG children's performances

- Charles Luwanga TTC

Mr. S. W. Phiri (CtC chairperson)

Ms. B. Hibajene (CtC vice chair person)

Mr. A. P. Mbula (CtC secretary)

Wednesday 25 March

- Provincial Education Office

Ms. Sarah Muhyila (PE Officer)

Left for Lusaka

30 March – 9 April 1998 Mpika, Kasama and Mbala Districts, The Northern Province

Monday 30 March

Travelled from Lusaka to Mpika

- Institute of Christian Leadership (ICL)

P.O. Box 450038 Mpika (Tel) 04-370269 (Fax) 04-370112

Mr. Patrick Kangwa (Child-to-Child Co-ordinator)

Tuesday 31 March

- Kabale primary school P.O. Box T144 Mpika (Tel) 04-370216

Mr. Chipandwe (Head teacher)

Mr. O'brain Daka (Deputy Head)

Mr. Titas Chitembo (Senior Teacher)

- Visitors from Chipata Teacher Training College P. O. Box 510189, (Tel) 062-2124, 21710, 21717

Ms. Agnes Vuttah (lecturer in English and social studies, PAGE committee member)

Mr. B. Tembo (CtC chairperson)

- Nyanji Primary School P. O. Box T144 Mpika

Mr. A. S. Simuwelu (Head teacher)

Mr. B. M. Mushili

Ms. M. Miselo

Ms. E. Mulapu

- District Education Office, Mpika

Mr. K.V. Mvula (District Education Officer)

Wednesday 1 April

Moved from Mpika to Kasama

- Provincial Education Office P. O. Box 410175 Kasama Northern P. (Tel) 222032-3

Appendices

Mr. Patrick C. Lufasi (Senior Educational Officer, Administrator)

- Kasama District Education Office P. O. Box 410074 (Tel) 221345 (Fax) 221345
Mr. Sampa Frances Kalenga (Senior Inspector of Schools)

- Malama Middle Basic School P. O. Box 410248 Kasama

Mr. John Chilopa (Head teacher)

Ms. Agnes Chanda (CtC committee secretary)

Ms. Chileshe Munsanje (CtC committee member)

- Chiba Middle Basic School P. O. Box 410200

Ms. Godfridah K. Kakula (Head teacher)

Ms. B. M. Minamba (CtC co-ordinator)

- Chifwani Basic School P. O. Box 410022 (Tel) 221385

Mr. Lyson Sinkala (Head teacher)

- Kasama Teacher Training College P. O. Box 410195 (Tel) 221126, 221450

Mr. F. B. Chanda (Principal)

Mr. Viwi Gondwe (Acting Deputy Principal)

Mr. Paul Mwamba (UNESCO Committee co-ordinator)

Moved from Kasama to Mbala

Thursday 2 April

- Mbala District Education Office P. O. Box 420240 (Tel) 450091

Mr. D. Hgosa Lubeya (District Education Officer)

Mr. S. D. Nyirenda (District Inspector of Schools)

Mr. James Chomba (Assistant Examinations Officer)

Mr. Christopher Katongo (Building Officer, WASHE Member)

- Mbala Basic School P. O. Box 420063

Ms. Maureen M. Simunchembu (Head teacher)

Ms. Elizabeth Michizimu (CtC committee member)

Ms. Felia K. Chileshe (CtC committee member)

Mr. Ebby Mubanga (CtC committee member)

- Mulungshi Middle Basic School P. O. Box 420192 (Tel) 450251/3

Mr. Bernard F. Nyerenda (Head teacher)

Mr. Chishimba Chongo (Deputy Head teacher, CtC Patron)

Mr. Andrew Mulenga (CtC assistant patron)

- P. O. Box 149 (Tel) 455089

Ms. Rhoda Mutema (Head teacher)

Ms. Febi Tembo (CtC co-ordinator)

Mr. Raymond Mumba (Chongololo an Conservation Patron)

Moved from Mbala to Kasama

Friday 3 April

- Chifwani Basic School P. O. Box 410022 Kasama (Tel) 221385

Ms. M. K. Kuku (CtC committee member)

Ms. C. N. Chipasha (CtC committee member)

Ms. C. N. Musaba (CtC committee member)

Mr. Maxwell Chiwele

Appendices

- Kasama TTC
Joseph B. Zulu (Science lecturer, CtC chairperson)

- Kasama Demonstration Basic School
Mr. Cristus Mulenga (Head teacher)
Mr. Peter Siame (CtC committee member)

- Musa Basic School
Ms. M.M. Chilufya (Deputy Head teacher)
Mr. H. K. Kabwe (CtC co-ordinator)

Moved from Kasama to Mpika

Saturday 4 April

- Zambian College of Agriculture (ZCA)
Mr. Jun Hirashima (JOCV Agricultural economics)

Sunday, 5 April

Mr. Paul Mumba (Kabale School)

Monday 6 April

- Kabale Middle Basic School
Ms. Fisyani Chilongo (G4B, joined Kabale in 94)
Mr. Kaoma Mulenga (Children with special needs, 96)
Ms. Suzzen Chipandwe (G4A, 97)
Ms. Exildah Chisopa (G4committee, 94)
Ms. Margaret Chanda (G6E, 94)

- Mpika Basic School P.O. Box 450004 Mpika (Tel) 04-370170
Ms. T. Bwalya (Acting head)

Tuesday 7 April

- Kabale Middle Basic School
Ms. Anna Mwaba (Home economics, G7A-E, 96)

- World Health Day Ceremony
- Mpika Basic School Ms. D. Muma (CtC Co-ordinator)
- District Education Office
- Mr. Like Mukelabai (Council Secretary) P. O. Box 45001 (Tel) 370294
- Dr. F. S. Kabulubulu (District Director of Health)

Wednesday 8 April

- Chilufya Basic School P. O. Box 450143 (Tel) 370764 ext38
Mr. Edward Phiri (Head teacher)
Ms. Cathrine M. Chama (CtC Co-ordinator)
Mr. L. B. Mfula (CtC Zone Co-ordinator)
Mr. L. Chilenga (District INSET co-ordinator, SHAPE co-ordinator)

- Chikwamda Middle Basic School P. O. Box 45052
Ms. Ester Chanda (CtC committee member)
Ms. Euajess Mutale (CtC committee member)
Ms. Brenda Moonga (CtC committee member)

Thursday 9 April

Kabale Middle Basic School

Ms. Thresa M. Milandile (6B, 90, CtC committee member)

Ms. Elizabeth K. Mulenga (6A, 93, CtC committee member)

7–10 June 1998 Mpika, Northern Province

Travelled from Lusaka to Mpika

Monday 8 June

- Kabale Middle Basic School P.O. Box T144 Mpika (Tel) 04-370216

Mr. Chisopa (Head teacher)

Mr. Patrick Kangwa (Child-to-Child Co-ordinator)

Ms. Fisyani Chilongo (G4B)

Ms. Annie Mwape (G7D)

Ms. Elizabeth Kalale (G1B)

Mr. Cornelium Masambachime (G5E)

Mr. Leonard Nkandu (G7C)

Mr. Paul Mumba (G6)

- District Education Office, Mpika

Mr. K.V. Mvula (District Education Officer)

Tuesday 9 June

- Kabale Middle Basic School P.O. Box T144 Mpika (Tel) 04-370216

Ms. Edwina Mumba (G3A)

Mr. Leonald Nkandu (G7C)

Ms. Victoria Mwashinkumbi (G7A)

Ms. Freda Mulenga (G5C)

Ms. Margret Nkole Mutengu (G7B)

Ms. Threasa Milandile (G6B)

Ms. Threasa Maila (G5A)

Mr. Titas Chitembo (G8)

- Mpika Basic School

Mr. Joseph Mutale (Acting Deputy Headteacher)

Ms. D. Muma (CtC co-ordinator)

Wednesday 10 June

- Mpika Basic School

Ms. M. Kunda (G1)

Mr. Nguni'hu (G8C)

Mr. John Mwape (G7A+B)

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Chapter 8 Observational Methods

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